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ABSTRACT

The primary objective of this study was to determine the educational needs of persons engaged in purchasing and materials management functions in order to develop a curriculum plan which would adequately prepare personnel for entry and career progression within the field of purchasing. In addition to literature reviews and analyses on the subject, data on such aspects as purchasing functions, job descriptions and classifications, and skills, knowledge, and personal characteristics required of purchasing personnel were obtained through personal interviews with 75 purchasing experts and mail surveys of 15 educators. Findings based on these data indicate that the organizational structure of purchasing education should include (1) a college degree in a broad area of business education, (2) in-plant company training in specific purchasing procedures, policies, negotiation, etc., (3) adult education external to the firm in new techniques and applied management training, and (4) membership in professional societies and associations. Recommendations are given for an undergraduate business school curriculum in purchasing-materials management, in addition to specific suggestions for the national and local National Association for Purchasing Management (NAPA) organizations, practitioners, and educators. (AW)

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CURRICULUM FOR PURCHASING

by

Richard L. Pinkerton

Sponsored

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A CURRICULUM FOR PURCHASING

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August, 1969

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PREFACE

This study is a result of a grant made by the National Association of Purchasing Management and by the NAPA Purchasing Educational Foundation, Inc. The stated objective of the study was to determine the educational needs of persons engaged in the purchasing and materials management functions. A Curriculum for Purchasing, the title of this report, sets forth the writer's conclusions and recommendations as to the educational needs of individuals engaged in this function.

The writer wishes to take full responsibility for the conclusions which he has arrived at on the basis of the research which was conducted. If any part of these conclusions or recommendations are offensive to the reader, he is cautioned to recognize that they are the writer's opinions and not those of any institution or organization that may have been involved in the research.

The author wishes to thank the many members of N. A. P. M. and the NAPA Purchasing Educational Foundation for the opportunity and financial assistance for this research work

A special thank you goes to the following people: Dr. I. V. Fine, Professor of Management, and Dr. Harland E. Samson, Associate Professor of Business and Education, University of Wisconsin; Herbert A. Hamilton, Jr., N. A. P. M. Assistant Secretary, Professional Activities; Harold Bloom, 1969 N. A. P. M. National President elect, and the following N. A. P. M. Professional Development Planning Committee members: James M. Hill, Jr., (Chairman), Raytheon Company, Lexington, Massachusetts; W. B. Brown, Jr., Acme Brick Company, Fort Worth, Texas; Albert J. D'Arcy, Union Carbide Corporation, New York, and George A. Fadler, Radio Corporation of America, Camden, New Jersey.

A very sincere appreciation is reserved for the respondents in the research sample for their generous cooperation, assistance and interest, without their contribution, this study would not have been possible.

My appreciation to my assistants; Mr. Paul Markos, graduate student in Business and Education and W. Dale Greenwood, M.B.A. graduate.

Finally to my wife Sandra and "Ginny" our faithful typist, go my profound thanks

Richard L. Pinkerton
Madison, Wisconsin
May 9, 1969

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CHAPTER I

INTRODUCTION, PROBLEM ELABORATION AND RESEARCH OBJECTIVES

Purchasing as a subject area for formal education has a multitude of meanings. Professor Wilbur B. England at the Harvard Business School has defined three broadly used and related terms which identify the subject area for the curriculum research:

> In general usage the term "purchasing" describes the process of buying: learning of the need, selecting a supplier, negotiating price and other pertinent terms, and the following up to insure delivery. "Procurement" covers wider areas and includes the duties performed by purchasing, as well as such additional functions of materials supervision and management as inventory control, receiving, incoming inspection, and salvage operation. When the procurement definition is expanded to include production control, traffic and shipping, the term "materials management" is often used.[1]

For the purposes of this research, the term purchasing includes procurement and materials management unless the terms are specifically separated.

THE PROBLEM

Considerable confusion and disagreement exists among practitioners and educators as to what specific educational experiences and training are needed to prepare personnel for entry and career progression within the field of purchasing. The objective of this research is to first investigate the nature of purchasing duties including the performance requirements and then to develop a curriculum plan. For this research, curriculum is defined as the sequential progression of education experiences necessary for occupational entry and career development within the purchasing field. Therefore, the problem is to identify the necessary educational goals, the educational experiences needed to satisfy these goals, the performance criteria and the organization required to form a curriculum plan.

Importance

The importance of the purchasing function and the gravity of the problem can hardly be denied if one accepts the premise and research which indicates that approximately 50% of a manufacturing firm's sales dollar is the costs of purchased goods and services.[2] At least a number of key corporation presidents also endorse purchasing as a major source of profit-cost control.[3] One author states that the profit contribution of a one dollar reduction in purchasing cost is 14 times that of the additional profit obtained by one dollar of increased sales.[4] Purchasing is not restricted to the private sector of our society, military and other government defense agencies have always considered procurement and logistics a critical aspect of national security planning and operations.[5]

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[1] Wilbur B. England, Procurement: Principles and Cases (4th ed., Homewood, Illinois: Richard D. Irwin, Inc., 1962), p. 2.

Factors Bearing on the Problem--Background

It appears reasonable to expect that purchasing would find an important role in the business school curriculum at the college and university level. However, the facts do not support this assumption. A recent study by Harold E. Fearon shows that a significant number of the member schools of the American Association of Collegiate Schools of Business (AACSB--the accreditation agency for business schools) have dropped purchasing from their curriculums.[6] Specifically, Fearon documents that of 76 AACSB members in 1955, 54 or 72% offered at least one course in purchasing and 8 or 11% more than one: ten years later in 1965, out of 114 AACSB members, only 58 or 51% offered at least one course and 9 or 8% more than one.[7] Even more striking is the fact that of the schools who were members in 1955 and 1965, 25 schools dropped their purchasing courses as opposed to only 4 who added the subject to their curriculum.[8]

M. S. Heidingsfield, Associate Dean and Professor of Marketing at Villanova University, has stated:

> In introductory business courses, students are told there are eight functions of marketing. Purchasing is included in the list but from that point on students never hear anything of purchasing.[9]

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[2] Lamar Lee, Jr. and Donald W. Dobler, Purchasing and Materials Management: Text and Cases (New York: McGraw-Hill, Inc., 1965), p. 10.

[3] "What Company Presidents Say About Purchasing," Purchasing Magazine (January 11, 1968).

[4] Victor H. Pooler, Jr., The Purchasing Man and His Job (New York: The American Management Association, 1964), p. 20.

[5] Military Management, The Coordinating Staff (Course 3D, Vol. 3C, Gunter AFB, Ala., Extension Course Institute, Air University, November, 1965), pp. 91-136.

[6] Harold E. Fearon, "Purchasing Education in Collegiate Schools of Business: A Comparative Study," Journal of Purchasing, Vol. 4, No. 3 (August, 1968).

[7] Ibid., p. 26.

[8] Ibid., p. 24.

[9] "Why Colleges Neglect Buying," The Iron Age (March 1, 1962), p. 128.

Daniel D. Roman, Professor of Management and Chairman, Doctoral Committee, School of Government and Business Administration at George Washington University, states that one of the reasons for lack of academic interest is their view that purchasing is too narrow and represents vocationalism with a lack of breadth, depth and scholarly presentation.[10] Roman feels that curriculums dealing with the broader approach, materials management, will win academic approval and he has designed a new M.B.A. program with majors in procurement - materials management.

The major purchasing association, the National Association of Purchasing Management (N.A.P.M.), has actively promoted purchasing courses and majors in business schools.[11] Almost from its founding in 1915, N.A.P.M. has placed education as its major objective and by 1930 the Association was working with Howard T. Lewis, of the Harvard Business School, to develop courses and text books.[12] During the years 1947-1952, the N.A.P.M. Committee on Education worked on curriculum development and produced a variety of educational materials including programs designed to promote college courses.[13]

Like all other aspects of business, government, and society in general, purchasing executives are deeply concerned with technological, economical, sociological and managerial change: how to prevent obsolescence for the man on the job and how to train and procure the neophyte who will and can cope with change.[14]

Ramifications of the Problem

From the foregoing observations, the following ramifications of the problem are identified:

1. While purchasing is an important business function, business schools seem to be placing less emphasis on the subject. Is this a failure of the business school to recognize the need or is the present business school curriculum adequate for purchasing education?

2. There seems to be a conflict between purchasing and the concept of materials management. If purchasing is evolving into the larger concept of total material

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[10] Daniel D. Roman, "A Reinterpretation of Procurement to Close the Academic Credibility Gap," Journal of Purchasing, Vol. 4, No. 4 (November, 1968), pp. 32, 37-39.

[11] N.A.P.M. is a national association of approximately 19,000 practitioners and educators. In 1968, the association changed its name from National Association of Purchasing Agents, N.A.P.A., to Purchasing Management, i.e., N.A.P.M. The headquarters is in New York City.

[12] Paul V. Farrell, The First Fifty Years of the N.A.P.A. (published by the National Association of Purchasing Agents, Inc., now N.A.P.M.--and printed at Nashville, Tenn.: Parthenon Press, 1965), pp. 17 and 41.

[13] Ibid., pp. 56-57.

[14] Paul V. Farrell, "Tomorrow's Managers," Purchasing Magazine (January 9, 1969), pp. 53-55; and Walter E. Willets, "New Patterns in Purchasing Management," Purchasing Magazine (January 9, 1969), pp. 56-58.

management and control, what curriculum changes--if any--will be necessary?

3. Despite the educational efforts of the purchasing practitioners to stimulate college involvement, an effort of almost 50 years, it appears that the universities and colleges have not responded. If special courses and majors in the field are indeed necessary, then a serious shortage of purchasing manpower will result unless the present practitioner can provide sufficient entry training by in-service programs and formal adult education.

4. If the lack of collegiate interest continues, there will be less scholarly research so necessary to cope with our explosive technology. Again, if purchasing is an important business and government function, this lack of basic research could have serious economic implications for society in general.

Research Objective and Scope

The objective of this research is to investigate the nature of purchasing duties including the performance requirements and then to translate these into a curriculum plan. The curriculum principles developed by Ralph W. Tyler will be adjusted for application to this particular problem.[15] Specifically this research will attempt to ascertain:

1. Purchasing organization and functions.
2. Position descriptions and job duties.
3. Purchasing methods, procedures and techniques.
4. Educational requirements.
5. Collegiate (2 years, 4 years and graduate) credit purchasing courses.
6. Company in-service training (within the firm).
7. Adult education outside the firm.
8. Professional society educational materials and programs (N. A. P. M.).

Objectives 1 - 3 pertain to what educational objectives must be attained for the purchasing field. How can we classify these objectives according to types of goals, cognitive[16] and affective?[17] The psychomotor or manipulative-motor skill area will not be developed in this research even though this ability is important for certain facets of the purchasing job such as operating a desk calculator.

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[15] Ralph W. Tyler, Basic Principles of Curriculum and Instruction (Chicago: The University of Chicago, 1950), pp. 1-2.

[16] Benjamin S. Bloom (ed.), Taxonomy of Educational Objectives Handbook I: Cognitive Domain (New York: David McKay Company, Inc., 1956), p. 7.

[17] David R. Krathwohl, Benjamin S. Bloom and Bertram B. Masia, Taxonomy of Educational Objectives: The Classification of Educational Goals Handbook II: Affective Domain (New York: David McKay Company, Inc., 1956).

Objective 4 is concerned with what educational experiences can be provided and at what levels to satisfy these purchases. Education is "a process of changing the behavior patterns of people," including how they think, feel and act or react.[18] No curriculum plan can completely ignore learning theory,[19] in particular transfer of learning and this research will point out transfer problems and reflect various theories on the subject.

Objectives 5 - 8 relate to the question of how purchasing educational experiences can be effectively organized.

This research does not include curriculum evaluation or measurement techniques nor pedagogical tools and other teaching methods as these areas are beyond the scope of the study. However, the basic curriculum plan is the first step and the micro "how to teach" can only come after the what, where, and for whom are identified.

Research Scope

The research is limited to purchasing activities within U.S. industrial and consumer manufacturing firms. The following purchasing activities are excluded from this study: purchasing for resale such as fashion buying, private label (for example, Sears Roebuck buys most of their products from private manufacturers), and public purchasing duties within government agencies. This research is primarily directed at industrial buying and materials management for goods used in the production of a manufactured product.

Any curriculum study cannot avoid examining where we teach what and this research will concentrate on collegiate and adult education with a limited observation of post secondary vocational and junior college programs.

Research Method

This research was accomplished in the following sequential stages: the detailed methodology is given in Chapter V.

1. An extensive secondary research or literature search was conducted as described in Chapters II-IV.

2. Personal depth interviews were conducted with 75 purchasing executives and experts including 70 individuals in 58 companies throughout the U.S., three editors, one consultant and the executive director of N.A.P.M. The respondents were asked questions relevant to purchasing organization, job requirements, methods, present educational efforts and future trends. Considerable material such as job descriptions and procedure manuals were collected for subsequent analysis.

3. A survey of educators was conducted by 15 personal interviews and 65 mail questionnaires with leading purchasing educators at colleges and universities throughout the U.S. The educators were asked questions dealing with present purchasing courses, majors, adult programs and general curriculum philosophy pertinent to the

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[18] Tyler, op. cit., p. 4.

[19] Robert F. Grose and Robert C. Birney (eds.), Transfer of Learning (Princeton, N.J.: D. Van Nostrand Co., Inc., 1963).

subject.

4. The results of the primary research were combined into findings. Respondents were subjectively selected as opposed to a statistical probability sample, and therefore, the findings are a composite opinion of experts and not representative of any universe.

5. In the analysis, conclusions and recommendation chapters, the secondary literature findings are combined with the primary research.

Chapter Organization

The next three chapters represent a detailed examination of the literature in terms of Purchasing Functions, and Education Requirements (Chapter II), The Collegiate School of Business-Implications and Learning Theories Appropriate to Purchasing (Chapter III), and Degree and Non-Degree Educational Programs in Purchasing (Chapter IV). This rather extensive research of the literature is necessary for two reasons:

1. No previous curriculum studies exist for this field and the pertinent material, while extensive, was fragmented; therefore, it was necessary to collate and organize the relevant past research and commentaries before any research design and subsequent primary research was attempted.

2. Curriculum specialists (professors and administrators) in the school of education have rarely--if ever--applied their expertise to the Collegiate School of Business curriculum studies and conversely, the professors and administrators in business schools (4 years and beyond) and purchasing leaders have rarely read, let alone applied, various curriculum and learning theories and practices. Thus, the three chapters concerning the secondary research attempt to bring the two schools, education and business, together. Only then can we really grasp the problems, criteria and opportunities for a purchasing cirriculum.

Quotations are freely utilized in order to reduce distortion of ideas, opinions and research statements of the various authors. At times it may appear that the next three chapters have too much quoted material, but this was done when paraphrasing would reduce the intensity and meaning of the particular author's view.

Chapter V, Methodology and Research Design, describes the primary research methodology including the sample design, collection instruments and analytical tools.

Chapter VI, Research Findings, lists the findings from the primary research. Chapter VII, Conclusions, relates the meaning of the secondary and primary research to the objectives of the study contained in this chapter and Chapter VIII, Recommendations, contains curriculum suggestions and recommendations for further research.

Significance

While the purpose of this research is to solve a purchasing curriculum problem, it is hoped that it will serve as an example for business school curriculum planning in general. It may also illustrate the application of curriculum principles to collegiate business programs.

CHAPTER II

PURCHASING FUNCTIONS AND EDUCATION REQUIREMENTS

This chapter contains an extensive review of the literature concerning purchasing functions, duties, educational requirements, and the issue of professionalism. What are the responsibilities and scope of purchasing positions? The objective is to integrate the literature in an attempt to define the parameters for a curriculum plan.

PURCHASING FUNCTIONS

It is necessary to examine present descriptions of the type of activities, tasks, and functions of purchasing on a broad scale before looking at detailed personnel classifications. Daniel D. Roman has outlined the procurement cycle as follows:[1]

Requirement Determination

Functional coordination with production, engineering, marketing, finance and quality control.

The Procurement Decision

Make or buy, standards, vendor certification, value analysis, market trends (forecasting), schedule, cost and budget considerations, capacity, control, opportunity alternatives (return on investment).

The Procurement Process

Source selection, schedule, cost analysis, negotiation, contract, and contract administration.

Materials Management

Shipping and receiving, economic order quantity determination, inventory requirements and control, material handling, scrap disposal, and stores. NOTE: Dr. Dean Ammer, a leading exponent of materials management, would add the production control function as a necessary responsibility of materials management because, "Production control and inventory control cannot be readily split apart."[2]

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[1] Roman, op. cit., p. 36.

[2] Dean S. Ammer, Materials Management (Rev. ed., Homewood, Ill.: Richard D. Irwin, Inc., 1968), p. 63.

It should be noted that the scope of functions for any particular purchasing procurement or materials management department will vary in different companies and industries according to size of firm, amount and kind of materials purchased, corporate organization philosophy and power positions of individual managers. A functional study by the National Industrial Conference Board in 1948 which lists the primary, secondary and no responsibility areas for purchasing in 280 companies is in general agreement with the procurement cycle described in this chapter.[3] An analysis of chapter subjects in fourteen purchasing textbooks which represent most of the currently available texts seems to verify the emphasis on the actual buying function.

MATERIALS MANAGEMENT

The trend for increased involvement in materials management functions (scheduling, inventory control, production control, and traffic) seems to be growing.[4] Other major functional areas within plant management claim responsibility for many of the same functions claimed by materials management and this conflict confuses any analysis of purchasing jurisdiction.[5]

There seems to be great controversy over the materials management concept.[6] The opponents claim this centralized approach invites empire building and power conflicts. For example, will the manufacturing vice president relinquish control over production control?[7] The proponents argue that integration of like functions give orderly direction to cost reduction.[8] What is important is the realization that the purchasing-procurement functions remain the same, only reporting relationships change under materials management. The purchasing agent-manager would have to compete with other executives for the materials management position just as he now does for greater recognition.[9]

In a 1967 study of 135 national and 135 Wisconsin firms with assets of one million dollars or more, Zenz indicates that 54% of the 162 respondents either use a materials management structure or intend to by 1971.[10] Zenz found that the most common functions listed for materials management were: purchasing, production control, inventory control, traffic (including shipping), stores and schedules.[11] While this study reflects a fairly even split opinion concerning the effect upon purchasing status, Zenz concluded that under a materials management structure, purchasing is reduced from its former "autonomous" status.[12] He points out that 71% of the materials managers came from departments other than purchasing (33% from production control vs. 29% from purchasing).[13] The implications are that purchasing managers must broaden their knowledge in order to qualify for the materials manager position.

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[3] The National Industrial Conference Board, Purchasing for Industry, Studies in Business Policy, No. 33, New York, 1948.

[4] Ibid., pp. 14-15; see also Managing the Materials Function: Tools, Techniques and Company Practices (New York: American Management Association, Inc., AMA Management Report No. 35, 1959).

[5] Deam S. Ammer, "Materials Management as a Profit Center," Harvard Business Review (January-February, 1969), pp. 74-75.

[6] "Purchasing Managers Strive For Broader Responsibilities," Steel (May 24, 1965), pp. 41-42.

[7] "Materials Management: Empire--or Profit Builder," Factory (April, 1964), pp. 92.

[8] Ibid., p. 93.

[9] Stanley E. Bryan, "Is the PA Prepared to be A Materials Manager?" Purchasing Magazine (Jan. 14, 1963), pp. 87-89.

J. C. Denton conducted one of the few, if not the only, factor analysis of purchasing functions with a 10% stratified sample of 527 personnel from "using" departments within the Standard Oil Company of Ohio.[14] The study was designed to measure the perception of purchasing functions from people who requisition or approve requisitions sent to purchasing. The Denton study produced the following functional factors of the various activities of buyers:

I. Conducting Transactions to Procure Supplies, Equipment and Services: (vendor selection, negotiation, specifications, pricing).

II. Protecting the Company's Capital and Assets: (follow up on credits, defects, shortages, price information, traffic, surplus disposal, trade-ins, etc.).

III. "Customer" Activities: (need to purchase, spare parts, quality control, inspection, coordinate inventories, pay off analysis, cooperation with operating departments).

IV. Optimizing Inventory.

V. Controlling Risks in Dealing with Vendors: (prior to order).

VI. Assuring the Purchase of High Quality Commodities.

VII. Administering Government Regulations: (legal).

VIII. Assuring Supplier Performance: (post order evaluation, expediting).

From the literature search, there appears to be rather wide agreement on the range of purchasing functions even though there is a conflict over jurisdictional control over some sub-functions such as inventory control and production scheduling.

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[10] Gary J. Zenz, "Materials Management: Threat to Purchasing?," Journal of Purchasing, Vol. 4, No. 2 (May, 1968), p. 40.

[11] Ibid., p. 41.

[12] Ibid., p. 45.

[13] Ibid., p. 44.

[14] J. C. Denton, "The Functions of Purchasing," Journal of Purchasing, Vol. 1, No. 2 (August, 1965), pp. 5-17.

However, for the purposes of curriculum analyses, the range of functions explains what must be accomplished. The next step is to determine the job descriptions of individual positions designed to accomplish the functions.

JOB AND POSITION CLASSIFICATION

The classification of purchasing positions is well defined in the literature. In terms of broad areas of work they are:[15]

1. Administrative (general management duties--planning, organizing, directing, controlling and coordinating) "with emphasis on the development of policies, procedures, controls and mechanics for coordinating purchasing operations with those of other departments."

2. Buying (vendor selection, placement, negotiation, ordering).

3. Expediting (follow-up).

4. Special Staff Work (value analysis, economic and market studies, special cost studies, special vendor investigations, and systems studies).

5. Clerical (writing orders, files, catalog and library, vendor records, prices, etc.).

Concerning actual position titles, the career ladder from executive to entry level is composed of the following steps with title variations due to size of firm and other corporate preferences.[16]

1. Vice President, director or manager of materials, procurement or purchasing (actual title varies widely and reflects scope of authority and responsibility; see the definition of purchasing on page 1 of this dissertation).

2. Purchasing Agent or assistant director, in some companies, this is the terminal purchasing position and the agent is the manager of the entire department. He may be the person designated to obligate the company from a legal standpoint and in most instances, he has at least some supervisory duties.

3. Special staff and research.

4. Supervising buyers and assistant purchasing agents.

5. Senior buyers.

6. Buyers.

7. Assistant buyers.

8. Order Clerks.

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[15] Lee and Dobler, op. cit., pp. 452-453.

[16] George W. Aljian (ed.), Purchasing Handbook (2nd ed., New York: McGraw-Hill, 1966), p. 23-15.

9. Expediters.

10. Storekeepers.

11. Clerical (stenographic, typist, filing).

Buyer Classification

The most common method of assigning materials (often called commodities) to buyers is by grouping those products and services with similar buying skills and technical knowledge such as electronic components, laboratory supplies, steel, copper, machine tools.[17] Another popular method of grouping materials is common use of the supplies, equipment and purchased services such as raw materials, construction, and maintenance-repair-operating (MRO). Other assignment methods may be made according to materials common to a finished product of the firm, a particular department or source of supply.[18] Of course, there are all-purpose buyers and buyers can also be classified according to their own particular level of buying complexity. There is also available the buyer classifications developed by the Bureau of Labor Statistics.[19]

The above list represents the full range of titles and great variation will occur within individual firms. However, purchasing manager-agent, buyer and expediter appear to be the most common positions aside from clerical jobs and special staff.

JOB DESCRIPTIONS AND DUTIES

This section will concentrate on the major duties of the management, buyer, expediter and special staff positions to provide a basis for the later analysis of required skills. The following job descriptions are intended to be "typical".

General Senior Management[20]

1. With guidance from general corporation policies, he develops policies and procedures and controls which coordinate purchasing activities with those of other departments and which maximize the total economic value received in terms of price, quantity, quality and service of purchased materials. This involves a balance and trade off between cost and desires.

2. Submits reports and recommendations to management concerning price trends, supply availability and substitute materials.

3. Supervises special staff functions such as value analysis and purchasing research as well as buying-expediting activities.

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[17] Lee and Dobler, op. cit., p. 455.

[18] J. H. Westing and I. V. Fine, Industrial Purchasing (2nd ed., New York: John Wiley & Sons, Inc., 1961), p. 35.

[19] June, 1967 National Survey of Professional, Administrative, Technical, and Clerical Pay, Bureau of Labor Statistics, Bulletin No. 1585 (Washington, D.C.: U.S. Dept. of Labor, Jan., 1968), pp. 60-63.

[20] Based upon Lee and Dobler, op. cit., pp. 468-471.

4. Reviews, designs and recommends records, reports and files from all subordinate purchasing units.

5. Participates in contract buying of important items of supply and approves the sources of supply and prices. If one exists, serves as chairman of the contract review board.

6. Supervises procedures, recommends, and negotiates the disposal or sale of surplus or salvage materials.

7. Prepares budgets and controls for variance including expense reduction and appraisal of purchasing performance.

8. Engages in professional self-development and the training, education and development of his department personnel.

Purchasing Agent Who Reports To A Purchasing Manager

Guided by established policies and procedures and with minimum supervision, a purchasing agent directs personnel of a buying group and is charged with the full responsibility for the planning, purchasing and resulting inventory levels for assigned materials classifications. Negotiates and places purchasing contracts for major commitments in assigned materials. Engages in personal and buyer development, education, and training. Recommends changes in purchasing procedures and often acts as an assistant purchasing manager.

Buyer

Guided by established policies and procedures, and with little supervision, the buyer occupies the principal "doer" position within the field of purchasing. He negotiates and places purchase contracts involving complex (and often highly technical materials and equipment). Assistants and junior buyers deal with the more routine and repetitive orders and act as "helpers" for full, senior and supervising buyers. As a specialist in an assigned materials classification, buyers provide liaison between engineering and outside vendors. Specifically, buyers:

(1) Review purchase requisitions and determine the purchase method.

(2) Investigate and maintain records of all qualified and acceptable vendors.

(3) Analyzes bids and quotations and required documentation prior to purchase.

(4) Negotiates prices and terms of contracts and places purchase orders.

(5) Participates in the development of material specifications.

(6) Acts as commodity specialist for engineering and other activities by supplying information and literature, arranging personal contacts, and performing other liaison activities.

(7) Interviews salesmen and studies markets, vendors, and techniques as a guide to future commitments.

(8) May supervise one or more assistant buyers and plan and direct their work as required.

Jack G. Briner at the University of Wisconsin Management Institute conducted an analysis of 40 purchasing agents at a seminar in 1953 concerning the daily work load distribution of buyers.[21] The results were:

1. Checking requisitions, 5% of a day.
2. Placing orders, 45% (quotations, selecting vendors, interviewing salesmen).
3. Making adjustments, 3%.
4. Following up delivery, 35%.
5. Filing reports and references, 2%.
6. Writing blanket orders (making partial releases on large orders), 3%.
7. Maintaining correspondence, 5%.

Expediter

Following established policies and procedures, with direct supervision of his section head and functional supervision from the buyer, an expediter maintains contact and performs follow-up with vendors on outstanding orders. He processes order acknowledgments, obtains delivery status from vendors, maintains contact with buyers concerning changes, initiates expediting action when needed, processes receiving documents and invoices for forwarding to controller's office, and researches unidentified receipts.

The functions and personnel duties as described in the literature have now been briefly summarized and represent the necessary antecedent to the next facet of curriculum investigation, the skills, knowledge and personality requirements necessary to perform these various tasks to satisfy functional requirements.

SKILLS, KNOWLEDGE AND PERSONAL CHARACTERISTICS

While the literature is ample and adequate in describing functions, and job classifications, it is weak in the area of qualifications. Typically, skills, knowledge and personal characteristics are not separated nor are they differentiated by job classification. What is described is often very general and could apply to almost any white collar position in business.

In 1961, N.A.P.M. published a list of personal characteristics deemed necessary for success in purchasing:[22]

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[21] Westing and Fine, op. cit., pp. 308-309.

[22] I. V. Fine (ed.), Purchasing As a Career (New York: Project Development Committee on Purchasing As A Career, National Association of Purchasing Agents, 1961), pp. 14-15.

1. Integrity
2. Dependability
3. Initiative
4. Industriousness
5. Unusual ability to cooperate
6. Unusual tact
7. Ability to learn
8. Ability to work on details
9. Mechanical aptitude
10. Good human relations skills
11. Inquiring mind
12. High sense of values
13. Ethical standards

Lee and Dobler emphasize that the foregoing list include many characteristics common to several professions but that initiative is particularly important since the buyer's work is largely unstructured. They also stress tact and cooperative abilities, ability and patience for detailed analyses, mechanical aptitude and knowledge of the manufacturing processes for the materials he buys.[23]

Duncan identifies the following "skills or knowledge . . . essential to satisfactory purchasing performance" from (at the managerial level) a sample of 44 California business firms:[24]

Skill or Knowledge	% of 44 Respondents of Mentioning
Ability to be imaginative and innovate	60.5%
Ability to be flexible and adapt to change	55.3
Ability to get along with people	55.3
Ability to assemble and motivate adequate staff	50.0

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[23] Lee and Dobler, op. cit., pp. 474-475.

[24] Delbert J. Duncan, Some Basic Determinants of Behavior in Industrial Purchasing (Reprint No. 7, Institute of Business and Economic Research, University of California, Berkeley, 1965), p. 12. Also included in "Purchasing Agents: Seekers of Status--Personal and Professional," Journal of Purchasing, Vol. 2, No. 3 (Aug., 1966), p. 25.

Skill or Knowledge	% of 44 Respondents Mentioning
Skill in coordinating forces inside and outside company	39.5%
Proficiency in controlling and reducing expense	15.8
Familiarity with new techniques	13.2

It is obvious that the above list is for purchasing management. Heinritz and Farrell state that for routine clerical operations, the necessary qualifications are: intelligence, ability to learn, accuracy, speed, and positive human relations; for supervisory positions, a sense of responsibility, loyalty and leadership are added; for line buying positions leading to top management, integrity, analytical skill, objectivity, resourcefulness, initiative, practical imagination, and "the ability to meet and deal with people" are the "higher order" requirements.[25]

In a 1954 special personality test validated by 53 buyers in one large purchasing department, Denton discovered some controversial traits for "better purchasing agents"--they were:

(1) Aggressive, assertive and influential

(2) Emotionally stable and well-controlled

(3) Not very sociable or outgoing

(4) Not particularly cooperative or easy to deal with.[26]

The third and fourth traits are very difficult to accept when one reads the very profound study concerning lateral relationships of purchasing agents by George Strauss.[27] The Strauss study discusses the possible conflicts purchasing often has with engineering and production scheduling and concludes that face-to-face human relations and communication skills are more desired than the use of authority, power, and hierarchy. Just on the basis of common sense one would question whether "not very sociable" and "not particularly cooperative" are desirable traits for any manager.

In the Standard Oil of Ohio factor analysis, Denton mentions intelligence, motivation, creative imagination, sociability, intellectual curiosity, interest in gathering facts and information, analyzing-comparing, extremely conscientious, and hard-working as important individual profiles for success in purchasing.[28]

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[25] Stuart F. Heinritz and Paul V. Farrell, Purchasing: Principles and Applications (4th ed.; Englewood Cliffs: Prentice-Hall, Inc., 1965), p. 55.

[26] John C. Denton, op. cit., p. 15; also reported in "Building a Forced-Choice Personality Test," Personnel Psychology, VII (Winter, 1954), p. 449.

[27] Leonard R. Sayles & George Strauss, Human Behavior in Organizations (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1966), pp. 429-444. See also George Strauss, "Tactics of Lateral Relationship: The Purchasing Agent," Administrative Science Quarterly, Vol. 7, No. 2 (Sept., 1962), pp. 161-188.

Individual firms may list personal traits, aptitudes and abilities in order to rate performance. The Detroit Edison Company rates their buyers according to the following traits: memory, flexibility, grasps situation, ethics, weighs problems, new ideas and new products, competition (obtains several sources and rates, etc.) and realizes problems of others.[29]

George Ray, Materials Manager for Scientific-Atlanta Company, provides an interesting example of the importance of human relations. His formal quarterly rating of buyers job skills includes such factors as:[30]

(A) Relationship with product line
Project and weekly status meetings, follow-up with schedule, storage for reserve stocks.

(B) Procurement
Timely processing of requisitions, approval of purchase requisitions--soliciting requests for quotations and follow-up, editing requisitions, pricing orders, delivery dates, government priorities and contract numbers, vendor returns, order follow-up, relationships with vendors, certificates of compliance.

(C) Records System
Open order file, tickler file, log books, project records, and quotation files. Scientific-Atlanta's annual progress review

Scientific-Atlanta's annual progress review stresses personal factors but does include some job skills:

(1) Personal factors
Ability to: accept responsibility, make decisions, solve problems, exercise judgment and aggressiveness.

(2) Relations with others
Ability to: gain and hold confidence, ability to be emphathetic; get along and meet the public.

(3) Job skills
Effectiveness at: cost savings, personal time, use of other's time, use of company facilities, adjusting to varying workload, self-supervision, plan and direct work of others; knowledge of: purchasing practices, business practices, internal production practices, transportation, company products; and finally, quantity and quality of work.

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[28] J. C. Denton, op. cit., p. 16.

[29] Victor H. Pooler, Jr., The Purchasing Man and His Job (New York: American Management Association, 1964), pp. 221-223.

[30] Harvey J. Berman, "Performance Checks Keep Buyers on the Ball," Purchasing Magazine (May 2, 1968), p. 56.

While the personal traits, skills and abilities described in the foregoing have much in common with the requirements for many other professional and upper white collar positions, they do reflect the rather unique internal and external nature of purchasing functions. Other than the marketing function and public relations, no other intra-corporation group has such constant and important personal contact outside the firm, such as vendor relations. Few other departments have such demanding internal or interdepartment relations.

A quick review of the purchasing functions and job positions cited in this chapter immediately suggest a very difficult combination of cognitive and affective behavior, i.e., knowledge and intellectual skills plus human relations ability.[31] There are few psychomotor skills in the purchasing field except those necessary in the clerical positions such as the ability to type and work desk calculators. One of the primary research objectives will be to classify the skill areas into a taxonomy scheme to serve as a basis for curriculum plans and educational experiences to satisfy the skill and attitude requirements.

At the purchasing management level, knowledge of the management process is essential: establishing objectives, planning, directing, controlling, and coordinating.[32] At this level, general management skills, philosophies, and concepts are the key educational objectives, not purchasing techniques. While the manager executive is responsible for the development of new techniques, he must be prepared for change as a member of a management, rather than a functional specialist.[33]

How do purchasing executives compare with top general managers in terms of values. Renato Tagiuri, Professor of Social Sciences at the Harvard Graduate Business School, compared 241 top purchasing executives with 653 general executives on the basis of 6 value orientations developed by the German philosopher, Edward Spranger; the 6 value classes are: theoretical man, economic man, aesthetic man, social man, political man, and religious man.[34]

Tagiuri found almost the same dominant value orientation for both groups, economic, theoretical, and political with aesthetic and social values being lowest; the economic value was slightly stronger for the purchasing executive.

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[31] Bloom, op. cit.; and Krathwohl, op. cit.

[32] Manfredo Manente, "The Process of Management and the Manager of Purchases," New York Purchasing Review (May, 1968), pp. 27-47.

[33] See, Thomas F. X. Dillon, "The Purchasing Executive of Tomorrow," Purchasing Magazine (Jan. 11, 1968); Dean Ammer, "Purchasing in the New Economy," Purchasing Magazine (Jan. 11, 1968); Walter E. Willets, "The Uncommon Organization Man," Purchasing Magazine (Jan. 11, 1968); Charles W. Behrens, "Purchasing to Keep Competitive," Pacific Purchaser (Feb., 1969), pp. 18-21.

[34] Renato Tagiuri, "Purchasing Executive: General Manager or Specialist?," Journal of Purchasing, Vol. 3, No. 3 (Aug., 1967), pp. 16-21. NOTE: The sample consisted of purchasing executives who attended the N. A. P. M. seminar for major purchasing executives at Harvard, 1962-1966, and executives who attended the thirteen week advanced management program at Harvard, 1960-1964.

The findings of this study are important, and they support the rather common opinion that top executives must have similar talents and skills regardless of their functional background. As Tagiuri states:

> This configuration describes a type of person who is simultaneously oriented toward what is useful, toward the practical affairs of the business world, toward the use of economic resources; toward power in the sense of the coordination of men's efforts, toward a rational, empirical approach; and towards ideas as well. This configuration well describes the orientation of any high-level manager, whose work consists of the coordination of material and human resources, working essentially through others. He is an idea man, a rational, objective person rather than one who is especially sensitive to aesthetic, altruistic or religious criteria when choosing alternatives.[35]

Perhaps the most succinct, dramatic and profound comments concerning the purchasing executive as a generalist vs. a specialist were expressed by Dean Ammer:

> The plain fact is that purchasing is not an occult act. It's simply a moderately specialized phase of business management. This is particularly true of the top purchasing job in any company. The purchasing executive should have more in common with the managers of manufacturing, marketing, finance and engineering than he does with subordinate specialists in his own department . . . . The myth that purchasing is a highly specialized activity with secrets known only to its practitioners is a logical product of history. For at least fifty years, P. A.'s have been using this myth to fight another myth: namely, that anyone can buy. The real truth lies in between these myths . . . just because there is a need for a specialized purchasing function, it does not necessarily follow that the function requires highly specialized skills . . . there is a level in the organization where management must have generalists rather than specialists. Today there are strong forces at work pushing the specialist lower and lower in the organizational hierarchy.[36]

Ammer then cites three forces which he believes are reshaping purchasing and which strengthen the need for the generalist:[37]

(1) Automation in the factory which has increased fixed equipment costs causing shut down due to supplier delivery failure to become more costly than before, i.e., purchasing is more critical.

(2) Automation in the office which gives more decision-making data

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[35] Ibid., pp. 80-81.

[36] Dean Ammer, "The Purchasing Executive: Specialist or Generalist?," Purchasing Magazine (January 14, 1965), pp. 78-79.

[37] Ibid., pp. 80-81.

and ties together information systems which relate all activities of the corporation, not just a specific functional area.

(3) Materials management. Automation and the computer serve to integrate all logistic functions and the need for total materials control is breaking down traditional department lines.

PROFILE OF PRESENT PURCHASING PERSONNEL

Number of Personnel in Purchasing

Very little information is available concerning the total number of purchasing personnel in the U.S. In 1967, the Bureau of Labor Statistics listed 26,839 buyers in private industry but this figure excludes manufacturing firms of under 250 workers.[38] The Bureau of Labor Statistics estimates that there were 150,000 purchasing agents and closely related types of buyers (10% females) employed in 1967, with "more than half" or 75,000 working in manufacturing industries.[39] While the figure is an estimate, the number of personnel in purchasing seems small when compared to the 2.9 million salespersons in retail business, 550,000 wholesale salesmen and 625,000 manufacturers' salesmen.[40] This comparison is ever more striking when you consider that the purchasing figure probably includes more management positions than the sales statistics and sales is just one of the functions of marketing.

In 1966, the membership of N.A.P.M. was 17,029. Based on an N.A.P.M. study with a sample return of 56% and the class interval midpoint of the department size table, a figure of 124,600 personnel of all types are involved in the purchasing departments represented in the survey (56% of the membership).[41] Extreme caution must be exercised with this statistic as we do not know how representative the survey is of total purchasing departments in the U.S. However, based on a 1960 survey of 143 companies (with a purchasing department) in manufacturing, utilities, transportation and construction industries, a figure of 164,000 purchasing personnel (for 1960) was calculated.[42] The figure was arrived at by applying the personnel ratios (.56% of employees in purchasing for all companies in the sample) in the Haas et al. study to the 1960 employment figures in the specified industries.[43] Again, great caution must be used. The total U.S. number of personnel in purchasing in all industries for 1960 could have been 362,000 based on the Haas et al. study and we do not know what the interaction between growth and reduction via automation has been since 1960.

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[38] June, 1967, National Survey of Professional and Administrative, Technical and Clerical Pay (Washington, D.C.: U.S. Dept. of Labor Bureau of Labor Statistics, Bulletin No. 1585, Jan., 1968), p. 17.

[39] Occupational Outlook Handbook (Washington, D.C.: Bulletin No. 1550, U.S. Dept. of Labor Bureau of Labor Statistics, 1968-69 Edition), p. 242.

[40] Ibid., pp. 269, 277 and 279.

[41] Marshall G. Edwards, "Profile of the N.A.P.A. Membership-Report on the Survey Tabulation," The Bulletin of the National Association of Purchasing Agents, New York (May 25, 1966), p. 2.

[42] George H. Haas, Benjamin March, and E. M. Krech, Purchasing Department Organization and Authority (New York: American Management Association, AMA Research Study 45, 1960), p. 16.

N.A.P.M. Membership

The N.A.P.M. survey of 1966 does provide some indication of the type of person engaged in purchasing, in particular, in management positions; the profile summary gives some idea of the potential student for continuing education.[44]

Size of Firm. The majority of N.A.P.M. members are in small purchasing departments; 56.7% have 1 to 5 people but 54% of the members are in companies with over 50 million in yearly sales including 36% in firms with plus 100 million; 24% are in firms of under 5 million annual sales. From the foregoing, one must avoid overemphasizing the small size of purchasing departments at least for N.A.P.M. members as 54% are in firms which would not be classified as small.

Experience. They have had extensive experience in purchasing (65% have +10 years experience), but are relatively new members of the association (45%, 5 years or less).

Educational Level. The educational level of the members is steadily increasing, with most of the members having completed supplemental training beyond high school and nearly half of the members holding a college or advanced degree (34% with Bachelor's degrees and 13% with Graduate degrees). Caution, the sample does not indicate whether the 13% with advanced degrees are also counted in with the Bachelor level, if they are, then the two figures cannot be added together for a total percentage of members with degrees.

In 1957, the N.A.P.M.--Harbridge House Study showed only 31% having a college degree and 5% having a graduate degree.[45] However, education will vary considerably by various local affiliations, the Purchasing Management Association of New York City reports that 51% of its members have a college degree.[46]

Functions. Thirty-six percent of the members responding have other functions reporting to the purchasing department. The most commonly cited functions reporting to purchasing are: stores 30%, traffic 23%, material inventory control 21%, receiving 19% and services 15%.

Products. The association membership covers a wide range of industrial categories, but fabricated metal products is by far the largest, with nearly 15% of the members. This seems to bear a direct relationship to the expressed commodity interests of the members, because 50% cited an interest in steel.

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[43] Paul Biederman (ed.), Economic Almanac - 1967-68 (New York: The MacMillan Co. and The National Industrial Conference Board, 1966), p. 38.

[44] Edwards, op. cit.

[45] Ibid.

[46] New York Purchasing Review (Sept., 1968), p. 15.

Duties and Age. Seventy-eight percent of the members consider their jobs to be that of a supervisor or manager. Likewise, 73% are over 40 years old for an estimated average age of 46 for the total membership.

Salaries

Salary structure is a good measure of the importance or supply and demand factors of a business function and it is at least a crude indication of the utility of the job skills and abilities. A recent salary survey of 2,000 readers of Purchasing Magazine reveal the following:[47]

Salaries	Buyer	Sr. Buyer/ Asst. P.A.	Purch. Agent	V.P./Dir. or Purch.
Below $10,000	83%	40%	28%	3%
$10,000-12,000	11%	33%	32%	8%
$12,000-15,000	6%	18%	25%	12%
$15,000-20,000	--	9%	13%	33%
$20,000-25,000	--	--	1%	28%
Over $25,000	--	--	1%	16%

Wulff summarizes the salary picture this way:

> The top purchasing jobs pay well, but buyers and P.A.'s salaries are not keeping pace with their responsibilities. While 16% of purchasing executives earn over $25,000 a year, 38% of all purchasing people are making less than $10,000. The majority of those with the title of P.A. get between $10,000 and $15,000.[48]

A recent survey by the Bureau of Labor Statistics gives wage data for 1968 for the following buyer groups--primarily in manufacturing firms.[49]

Buyer I--buys routine readily available off the shelf Median salary: $7,296 (+4.5% over 1967)

Buyer II--buys routine off the shelf service and items of a more technical

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[47] Peter Wulff, "Salary Survey: What P.A.'s Are Paid," Purchasing Magazine (Sept. 5, 1968), p. 44.

[48] Ibid., p. 42.

[49] "Buyers Pay Rose 4.5-5.59 in 1968, BLS Study Shows," Purchasing Magazine (March 20, 1969), p. 20. Source: National Survey of Professional Administrative, Technical, and Clerical Pay. June, 1968 (Washington, D.C.: U.S. Dept. of Labor, Bureau of Labor Statistics, Jan., 1969).

nature; some new sourcing
median salary: $8,580 (5.5% over 1967)

Buyer III--technical and specialized buyer some custom engineering required, and some supervisory duties
median salary: $10,140 (4.5% over 1967)

Buyer IV--highly technical and complex usually custom designed and more supervisory duties
median salary: $12,180 (5.3% and over 1967)

The buyer-P.A. salary structure can be a real recruiting morale problem if one is aware of the starting salaries for graduates with business degrees.

The average 1968-1969 starting salary for Bachelor degree recipients entering manufacturing appears to be $9,600 or $800 per month; the average 1968-69 starting salary for Master's degree (MBA)--non-technical Bachelor is $10,980 and $11,676 for the MBA with a technical undergraduate degree.[50] One study of 208 firms gives $8,400 average starting salary for the Bachelor degree in business which demonstrates the wide diversity in starting salaries for various positions, firms, industries and records of individual students at various schools.[51] The 1968 modal range for the MBA starting salary is revealing: Harvard, $13,000-$13,999; Chicago, Stanford, MIT, $12,000-$12,499, and at Columbia, Wharton and Dartmouth, $11,000-$11,499.[52]

It is evident that purchasing salaries are lagging when compared to typical starting salaries for college graduates. If the procurement field requires the college degree, salary structures must be reviewed but it must be established that the degree is necessary and later sections of this research will attempt to answer this problem. In view of the starting salaries described in the foregoing, it is a bit puzzling to read the following current statement:[53]

> "The best job market (for the purchasing man) isn't for the young man just out of school, but the guy making his first job change," reports a St. Louis employer. "Such a man can demand $10,000 a year--and get it."

The implication that $10,000 is such a high salary might not be agreeable to the new college grad with a B.A. and no experience who started at $9,600 or the M.B.A. graduate at $11,000.

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[50] The University of Wisconsin, School of Business Placement Office, Madison, Wisconsin. Based on National Salary Surveys.

[51] Frank S. Endicott, Trends in the Employment of College and University Graduates in Business and Industry--1969 (Evanston, Ill.: Placement Office, Northwestern University).

[52] John G. Kneen and L. Harriss Morrison, Jr., "The Recruiting Scene--A Recent Report," The M.B.A. (Jan., 1969), p. 53.

[53] "Book Learning Pays Off," Purchasing Week (Feb. 12, 1968), p. 3.

EDUCATION REQUIREMENTS

The literature search for detailed education requirements (subject matter and formal programs-degrees) to match the various purchasing job level skills and duties was not particularly revealing. In fact, no single source was uncovered which listed the various purchasing knowledge, skills, and personal attributes for each purchasing position with corresponding subjects and the "where and how" to obtain this education. Much of the literature in this area is devoted to purchasing management. Professor England describes the need for broad general business education for purchasing management who attend Executive Seminars and for student academic degree programs. The "nuts and bolts" should be left to inplant training, association programs--and discussions of "current purchasing practices" can be accomplished by organizations such as the American Management Association.[54]

> The emphasis, however, must be on learning broad principles, rather than on the details of the buying job. Training in specific areas is best left to inplant programs conducted by purchasing people . . . . Purchasing education must therefore develop analytical thinking, flexibility of viewpoint, imagination, and creativity to meet the challenges of rapidly changing conditions.[55]

England attempts to justify these requirements on the basis that electronic data processing and the systems approach to management require a total business orientation and ability to cope with change rather than a highly specialized focus. Like many other purchasing leaders, England does not favor a purchasing major at the college level but rather a combination technical and business background.[56]

> Probably the ideal educational background for a buyer in a technically oriented industry is an undergraduate degree in engineering and a master's degree from a top business school . . . the combination of engineering and business administration provides solid training in technical skills, mathematics, human relations, management economics, statistics, business functions, accounting information and control systems, administrative practices, and legal, social and political environmental problems. Strong emphasis is placed on development of analytical skills research, and report writing.[57]

Of the purchasing course at Harvard (started in 1933 by Professor Howard T. Lewis), England points out that the course has always stressed the managerial point of view with emphasis on interfunctional analysis, lateral relations and decision making from a cost-profit viewpoint.

It is readily apparent that such recommendations are not based upon a detailed breakdown of job requirements, if an undergraduate engineering degree is suggested, we must ask what percentage of the job duties and tasks require professional engineering work and skill. If the purchasing job is primarily a business function with a basic knowledge of technical terms, processes, etc., then technical training can be provided either in college courses, adult seminars or on the job training, but the engineering degree is not necessary for an essentially non-engineering position. There is strong evidence that the desire for the B.S. engineering-M.B.A. graduate is an attempt to increase the stature of purchasing by requiring professional degrees and to improve relations with engineering departments by hiring "their kind of people."[58] As Lee and Dobler state:[59]

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[54] Wilbur B. England, "Educate for the Long View," Purchasing Magazine (Nov. 4, 1965), p. 70.

[55] Ibid., pp. 70-72.

[56] Pooler, op. cit., pp. 258-259.

[57] England, op. cit., p. 73.

> Most authorities now believe that an academic major in business administration, with elective courses in the technical and mathematical areas, is most helpful . . . engineering training very rarely provides the specialized technical know-how required for a buyer of any specific material . . . it appears that it is generally easier for a young buyer to obtain the required technical know-how on the job than it is to obtain the required commercial know-how on the job.

Pooler appears to agree with the broad management approach when he recommends the following subjects:[60]

Principles of management
Business economics
Accounting
Statistics
Marketing
Manufacturing
Finance
Human elements of management (business relations)
Communication
Legal

Certainly, the majority of firms prefer college degrees in either engineering or business for buyer level and up;[61] the basic problem is to be more detailed as to the courses in view of precise job descriptions. There are strong leanings toward the engineering degree and an M.B.A. with a provision that if only one degree is possible for the student, then the Business Administration degree should be taken with courses in: general economics, accounting, communications, law, statistics, organization and management, marketing, corporation finance, industrial purchasing, sales forecasting, pricing, traffic, production planning and control.[62] One can almost say that many purchasing managers would like engineers but feel they cannot attract them from a salary and status standpoint and thus, settle for the business degree.[63]

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[58] Pooler, op. cit., pp. 258-260.

[59] Lee and Dobler, op. cit., p. 476.

[60] Pooler, op. cit., p. 254.

[61] Aljian, op. cit., pp. 23-14 to 23-17.

[62] Heinritz and Farrell, op. cit., pp. 53-55.

The problem seems to be that little justification has been, or can be, developed for the technical degree, i.e., too much of the position appears to be of an economic rather than a technical nature. A study of the type of degree held by one large local association of N.A.P.M. (Milwaukee), revealed 44.7% of the degree holders had business degrees, 22% engineering.[64]

It does appear that there is an awareness or trend toward broader education in purchasing based on a general business curriculum which supports the position taken by Professor England, Dr. Ammer and others.[65]

After examining the nature of the purchasing position and typical examples of present education and training, the question of professionalism is appropriate. Is business in general and purchasing in particular a profession? This question is important because the issue of professionalism immediately raises many questions concerning education.

PURCHASING AS A PROFESSION

The following criteria or components are generally accepted as the measure of whether a vocation is or is not a profession:[66]

1. A Need to Strive for the Ideal of Altruistic Attitude and Behavior (consciously seeking and serving the welfare of others, a lack of self-interest).
2. Necessity for a Carefully-Conceived Code of Personal Ethics.
3. Importance of a Highly Unified Body of Specialized Knowledge (documentation of ideas, experiences, research findings, discoveries-development of principles, laws, theories, organized procedures--all unified).
4. Significance of a Broad Educational Background Containing Generalized Knowledge (multi-disciplinary not just a single specialty).
5. The Role of Searching Examinations for Determining Mastery of Specialized and Generalized Subject Matter (testing of individuals concerning theory and practice).

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[63] Harold A. Berry, Purchasing Management (Waterford, Conn.: Prentice-Hall, Inc., National Forum Institute, 1963), pp. 55-56.

[64] Ibid., p. 54.

[65] Dr. Robert P. Cook, "Education for Purchasing Management," Purchasing Magazine (June 13, 1968), pp. 75-77.

[66] Edwin S. Overman, The Professional Concept and Business Ethics (Bryn Mawr, Pa.: The American Institute for Property and Liability Underwriters, Inc., est. date 1963), pp. 3-13.

6. Functions Performed by Professional Societies Consisting of those who have been Admitted to Membership in the Profession (a national society with educational goals and ethical standards with authority to expel members who fail to adhere to the standards).

7. Respect and Status in Society.[67]
It is important to recognize the evolutionary nature of the professions and the practice came far before the full development of professional status, i.e., the clergy and medicine are the oldest professions and while the Hippocratic Oath goes back to 480-337 B.C., the American Medical Association first codified the ethical principles in 1848.[68] Law as a formal profession goes back to the 12th or 13th century, yet the National American Bar Association was not established until 1878, and as late as 1851 all voters in the state of Indiana could practice law.[69]

There is another set of commonalities in the list of professions including clergy, law, medicine, accountancy, education, engineering, science, insurance, real estate, military, police-fire, etc.

(1) Most of the members are self-employed or work with institutions contacting or representing the general public on the basis of their expert knowledge.

(2) Local, state, and federal laws have usually been enacted together with state regulatory bodies, boards, etc., to license or register the members to protect the general welfare of individual citizens.

(3) In almost all instances, the professions deal with the physical and mental wellbeing, safety, and financial security of individual citizens who cannot judge the expertise of the advisor.

(4) Generally, the professions are in vocations universally needed (present or potential) by all members of the society.

(5) In most instances, college and university degree programs are a mandatory requirement for membership. Some trade school or other apprentice training may be authorized.

(6) Few of the professions match all of the six criteria listed except perhaps for the clergy. Enforcement of ethical codes is difficult, even in the fields of law and medicine.

(7) Professional attainment is a personal-individual achievement not usually accorded institutions.

Before examining purchasing as a profession, one must consider whether business in general is a profession.

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[67] By the writer, not Overman.

[68] Overman, op. cit., p. 29.

[69] Ibid., pp. 54-55.

As Professor Andrews of the Harvard Graduate School of Business points out, the problems of defining professionalism for business are magnified by the heterogeneity of business activity, i.e., "the institutions of business are more prominent than the individual businessman."[70] While it is true that businesses have professionals working in them (engineers, CPA's, lawyers), what about the management per se? Andrews is quite optimistic about the "direction" and "process" of professionalism of management caused by the growth of professional graduate business schools which have helped spread the use of sophisticated techniques and a broad interdisciplinary approach. Other positive forces moving business toward professionalism are: the very nature of competition as an ultimate judge, leadership in change (product innovations, etc.), deeper relations with government (defense, NASA), public service by executives, more involvement on public problems (the Job Corps, etc.), and the emergence of self-control.[71]

The "body of knowledge" criteria is carefully described by Andrews as the study and research in the post and undergraduate professional business school which stresses functions common to all industries (but not a department curriculum) such as finance, marketing, and production; analytical tools and processes common to all functions such as quantitative analysis and organization behavior; environmental factors affecting the firm such as social, economic, political and technical factors; and policy decisions concerning goals and objectives.[72] Andrews states that this curriculum calls for study in: economics, mathematics, statistics, individual and social psychology, applied anthropology, sociology, history, and political science.[73] The undergraduate preparation consists of language, mathematics, depth understanding of some discipline, science appreciation, values, etc.--the liberal tradition.[74] For Andrews, the vocational group of business schools are the undergraduate business schools which combine a general undergraduate education with a "useful" introduction to the functions and administrative process of business; the other group are the graduate business schools which stress the "core disciplines of business," and some treatment of functions with minor emphasis on general management.[75] The distinction between graduate and professional schools is important.

One of Andrews' key points is:

> Is business a profession? is not really the question which we should address further. How business and the established professions can better serve society is a much more important question.[76]

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[70] Kenneth R. Andrews, "Toward Professionalism in Business Management," Harvard Business Review (March-April, 1969), p. 51.

[71] Ibid.

[72] Ibid., p. 52.

[73] Ibid.

[74] Ibid.

[75] Ibid.

[76] Ibid., p. 56.

With this broad background of professionalism, just how professional is the field of purchasing, a business sub-function? If one reviews this particular chapter, ample evidence is available to indicate that purchasing has definitely taken the direction towards professionalism:

(1) Altruistic behavior: none of the professions are completely free of self-interest and there is strong evidence that purchasing recognizes its role as one of service to others within the company and corporation goals are moving toward more social responsibility.

(2) Ethics: one of the first acts of N. A. P. M. was to establish a code of ethics in 1923.[77]

(3) Unified body of specialized knowledge: There are a fair number of textbooks, college university courses, a professional journal, practitioner publications, research reports, etc.: a good start has been initiated.

(4) Broad educational background: Purchasing has been weak in this area but the leaders are urging a broader approach and more formal academic degree type and adult education.

(5) Examinations and Certification: Attempts have been made at certification but there is great division on this issue. One group argues that certification designates a level of qualification and serves as an incentive program for personnel to seek education.[78] The National Institute of Governmental Purchasing does have a certification program and support for a similar program for all purchasing employees comes from this group. Others disagree contending that public purchasing is quite different than private industry and while certification is appropriate for those spending tax dollars, the company will be the final judge of those who purchase for private industry; in addition, purchasing varies according to the industry which would necessitate multiple examinations.[79]

As a result of this debate, N. A. P. M. compromised and initiated the Professional Educational Program. If an applicant does not have transcripts showing the successful completion of certain college credit courses, equivalency examinations are given. Thus far, the program has received little interest. Walter E. Willets, consulting editor of Purchasing Magazine, author, and purchasing agent for Conover-Mast publications, implies that certification for purchasing is a narrow approach and self-defeating from a broad management aspect which various purchasing leaders urge.[80]

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[77] Farrell, op. cit., The First Fifty Years of the N. A. P. A., p. 24.

[78] John F. Ward, "Why P. A.'s Need Certification," Purchasing Magazine (Feb. 23, 1967), pp. 128-134.

[79] Glenn W. Inman, "Certification Not For P. A.'s," Purchasing Magazine (April 6, 1967), pp. 180-186.

Andrews presents a very strong case against certification of any kind for management including a requirement to study any specific curriculum on the grounds that businessmen, lawyers, and doctors alike learn much more from practice than academic preparation:[81]

> "But the diversity of business practice, the market mechanism rewarding successful and penalizing unsuccessful entrepreneurship, and the organization means for supervising competence in management all make it impracticable and unnecessary to erect educational requirements in imitation of the formality of law, medicine, and the ministry."

(6) Professional Societies: Certainly N. A. P. M. fulfills this requirement although no real means of disciplining members exists but it is doubtful whether any society of members employed by business institutions could ever control members unless the institutions agree as in the ministry, law and medicine.

(7) Respect and Status in Society. Individuals in purchasing are working to improve their status within their own companies. Society as a whole is virtually ignorant of the procurement function. One would have to conclude from the previous references in this chapter that purchasing is gaining in this direction but has a long way to go. It seems reasonable to conclude that purchasing is proceeding in the proper direction of professionalism.

A final comment concerning business and purchasing professionalism. Unlike other professions, businessmen work under very stringent anti-collusion/anti-monopoly and a host of other restrictive federal and state and local laws. In some ways, this tends to limit full exchange of research, ideas, and practices. In addition, many firms are reluctant to exchange information and research because of the dollar investment in techniques to improve competitive position. Companies rarely publish their research and many firms restrict publication by their employees. In this respect, business as a whole and purchasing as a sub-segment, fall far short of the research exchange common in law, medicine, education and the basic sciences.

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[80] Walter E. Willets, "What Kind of Education For Purchasing?," Purchasing Magazine (Jan. 14, 1963), p. 91.

[81] Andrews, op. cit., pp. 52-53.

CHAPTER III

THE COLLEGIATE SCHOOL OF BUSINESS--IMPLICATIONS AND LEARNING THEORIES APPROPRIATE TO PURCHASING

In 1959 two elaborate appraisals of college business education were published which have had a major effect on business specialties such as purchasing: a Ford-sponsored study was conducted by Professors Robert Aaron Gordon, Economics--University of California, Berkeley, and James Edwin Howell, Economics--Harvard, on leave from Stanford.[1] A Carnegie study was conducted by Professor Frank C. Pierson, Economics, Swarthmore and other contributors.[2] Both studies evaluated curriculum, students, faculty, objectives, and research activities of undergraduate, graduate and adult business education programs.[3]

THE GORDON-HOWELL REPORT

In the 1,231 pages of both reports, purchasing is mentioned just twice. Gordon and Howell state the following in their criticism of over-specialization and vocationalism.

> But one wonders how serious this faculty shortage really is when the schools have the resources to offer not only marketing principles and marketing management, but retailing, wholesaling, purchasing, salesmanship, etc.[4]

This is the only reference to purchasing in their entire study which includes a survey listing of present majors and courses. They recommend two years of general education in the undergraduate program; humanities and fine arts, natural sciences and mathematics, and behavior social sciences.[5] The core program is one to one-and-a-half years of organization theory and management, finance, marketing, industrial relations, human relations, production or operations management, managerial accounting, statistical analysis, legal, economics, and integration-business policy.[6] Specialization or concentration would then be limited to two 3-hour courses and two related but nonbusiness courses.[7] The M.B.A.-graduate program is also based on general management core of economics, accounting, report writing and research, with one semester of specialization,[8] or three or four courses; however, a heavier emphasis on concentration is endorsed for the M.B.A. program.

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[1] Robert Aaron Gordon and James Edwin Howell, Higher Education for Business (New York: Columbia University Press, 1959).

[2] Frank C. Pierson and others, The Education of American Businessmen, A study of university-college programs in Business Administration (New York: McGraw-Hill Book Co., 1959).

[3] Both studies have been summarized by Leonard S. Silk, The Education of Businessmen (New York: Committee for Economic Development, Supplementary Paper No. 11, Dec., 1960); and Educating Tomorrow's Managers (New York: Committee for Economic Development, Oct., 1964).

[4] Gordon and Howell, op. cit., p. 139.

[5] Ibid., p. 173.

Thus, Gordon and Howell stress a firm, traditional foundation of general education, a core of business fundamentals and limited specialization to accomplish the following:

> Hence, it is particularly important that schools of business concentrate on the education foundations upon which a student can develop competence through continued self-education, since as many have suggested, the most important thing a student can take away from college is the capacity to learn for himself. These educational foundations should emphasize the kinds of fundamental knowledge and those skills and attitudes which are most common to all types of business positions, are the more important the more responsible the position, and are the most difficult for a student to acquire after college.[9]

Gordon and Howell recommend specialized training or terminal vocational and all appropriate programs for the junior college level with the caution that these institutions understand that such programs do not prepare students for management or professional specialties.[10]

Purchasing as a separate course was not identified as a core area in the past nor is it recommended as a critical area for future curriculum. While Gordon and Howell would probably not strongly object to one course in this area, they evidently feel that subjects or functions of this nature require the broader interdiscipline of the key subjects they cite and in this respect, Professor England and a few other leading purchasing authorities agree. The other implication is that the detailed skills of the purchasing positions are of a training nature, to be conducted by self-development and continuing formal training; they quote a prominent business leader:

> Industry can train more effectively, more economically, and with greater skill than can a university or school of business. We look to the school for graduates who understand the fundamentals of business principles rather than graduates who specialize in detailed practices.[11]

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[6] Ibid., p. 209.

[7] Ibid., p. 213.

[8] Ibid., pp. 275, 277.

[9] Ibid., p. 48.

[10] Ibid., pp. 239-241.

[11] Ibid., p. 112.

Granted that the campus recruitors may not reflect top executive opinion when hiring for managers of functional areas, the opinion that industry should train and college should educate is a logical approach and one of the major objectives of this research is to separate job requirements into training and education needs, the two should not be commingled.[12]

Gordon and Howell also discuss the desirability of an engineering background for management careers and conclude that:

> What seems to be valued, however, is not the engineering knowledge itself. Rather, employers find that engineering graduates as a group have been more carefully screened in terms of ability than have liberal arts or business students . . . . In short, engineers have been subjected to a reasonably rigorous training which stresses the development of analytical and quantitative skills based on a strong foundation in mathematics and science.[13]

The authors then warn of the serious weaknesses in the engineering education including deficiencies in handling qualitative problems, working with incomplete information, dealing with the broader external environment, interpersonal relations, ignorance of economics, and generally poor background in other social sciences; many of the foregoing are key skills of staff and managerial positions and in particular for the lateral relation aspects of the purchasing job.[14]

> On balance, engineering, training (including industrial engineering) is far from being an ideal preparation for business, although it often is superior to many business programs now constituted.[15]

Of course, the combination undergraduate engineering degree--M. B. A. --would or should solve many of the problems but the limited number of personnel with this background does not make this combination education a very practical or realistic requirement.

THE PIERSON REPORT

The Pierson Report contains similar observations and recommendations to those that appear in the Gordon-Howell study except that the major functions such as accounting, finance, marketing, personnel, production and general management are analyzed in more detail. Purchasing is identified by Timms, a contributor, as a current subject within the production major but it is not listed in any of the recommended changes for a very curious and perhaps erroneous reason:[16]

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[12] Alpha of Alabama Chapter, Beta Gamma Sigma, Collegiate Education For Business (University, Alabama: Bureau of Business Research, Printed Series No. 19, University of Alabama School of Commerce and Business Administration, April, 1954), comment by James B. McMillan, p. 69.

[13] Ibid., p. 237.

[14] Ibid.

[15] Ibid.

[16] Pierson, op. cit., pp. 483, 488 by Howard L. Timms, Professor of Management, Indiana University (contributor).

> Purchasing probably entered the curriculum back in the days when industrial purchasing was often a subfunction of production in many manufacturing firms. Recent industrial studies indicate that it is now more often considered a subfunction of finance, or a direct responsibility of top management; the reasons for this change are not fully clear, but it probably reflects the high percentage of product cost represented by purchased materials cost in many manufacturing companies.

This statement is unusual because the finance segment of the Pierson report does not mention purchasing and one study (Timms did not identify the studies) shows 34.7% of the purchasing departments report to the president, 25.4% to vice presidents of manufacturing planning, 13.9% to executive vice presidents, 14% to plant and general managers and only 2.6% to the treasurer; however, this study is rather broad and combines too many functional areas into each title.[17] Another study indicates that 52% report to the president, 19% to the vice president (manufacturing or production), 10% to the general manager, 9% to the plant manager and 6% to the treasurer.[18] One of the leading professors and authors of manufacturing textbooks, Professor Franklin G. Moore sees purchasing as a manufacturing function reporting to the executive vice president.[19] Still another major author in the manufacturing area states that while the typical material or purchasing manager reports to the vice president of manufacturing, materials management ought to be a separate function at the vice president level reporting to the president.[20] In still another study, 62% of 147 firms had purchasing reporting to general management (29% to the president), 21% to production management and 14% to finance and 13% undecided.[21] There is an obvious variance in just where the purchasing business function should be or is placed and this may account for the lack of academic interest in it, i.e., which professor is interested, experienced or responsible for this area?

Martin L. King of the American University points out that the historical evaluation of purchasing is within the manufacturing area of the business and that the materials management concept is a systems approach to integrating like functions but it does not really do much to improve purchasing or to stimulate research since manufacturing is preoccupied with form-creating activities and materials management, including coordinating activities.[22] Professor King then argues that purchasing should be part of the academic marketing department but not under a business marketing organization since the marketing discipline does include buying and selling, forecasting, and customer servicing; also the function is not restricted to manufacturing firms.[23] In a 1965 study of 58 AACSB schools teaching purchasing, almost 50% offered the course in the management department, 25% in marketing and 25% in more general business administration areas.[24] As Fearon points out, some experts believe marketing professors will emphasize the selling side to the neglect of purchasing.[25]

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[17] Aljian, op. cit., pp. 2-9 to 2-10.

[18] Westing and Fine, op. cit., p. 31.

[19] Franklin G. Moore, Manufacturing Management (4th ed.; Homewood, Ill.: Richard D. Irwin, Inc., 1965), pp. 43 and 711. Pages 710-741 contain a major chapter in purchasing.

[20] Leonard J. Garrett and Milton Silver, Production Management Analysis (New York: Harcourt, Brace & World, Inc., 1966), pp. 251-254.

[21] George H. Haas, Benjamin March, E. M. Krech, Purchasing Department Organization and Authority (New York: American Management Association, Research Study U.S., 1960), pp. 56-57.

[22] Martin L. King, "In Search of an Intellectual Home for Purchasing," Journal of Purchasing, Vol. 3, No. 1 (Feb., 1967), pp. 64-66.

If this discussion concerning an academic home for purchasing seems overdone, the reader must remember that both the Gordon-Howell and Pierson reports ignored purchasing as well as materials management. This is either because they felt the subject is vocational as Gordon and Howell imply, or because Timms in the Pierson report did not know where to place the subject and the other contributing authors ignored the entire issue.

LEARNING THEORY AND TRANSFER ISSUES

Although the Ford and Carnegie studies appear valid, reasonable and correct from a common sense standpoint, neither report references any educational psychology principle, teaching theories or analysis based on any curriculum literature. It is always dangerous to conjecture, but one receives the general impression that the authors might unknowingly be endorsing a classical liberal curriculum with a moderate acceptance of mental discipline learning theory. In other words, a combination of faculty psychology and classicism theories. In faculty psychology, German philosopher Christian Wolff (1679-1754) held that the mind had several faculties: knowing, feeling, and willing with "knowing" divided into perception, imagination, memory, and pure reason.[26] The classicists (20th century examples are Robert M. Hutchins, Mortimer J. Adler and Mark Van Doren) stressed the humanist approach with emphasis on intellectual development in order to pull out of an individual the ideal nature of man.[27] The two theories were and continue to be compatible, i.e., train the faculties through classical subjects.[28]

As Biggie states:

> Mental disciplinarians are convinced that knowledge of immediate practical value is of little importance.[29]

This does not imply that Gordon and Howell or Pierson would agree with mental discipline theory in totum, perhaps they "lean" towards the traditional subjects but obviously recommend new disciplines and their critical comments concerning engineering seem to indicate that they might agree with Thorndike's rejection of mental discipline (based on experiments [1901-1924] at Columbia University), that the improvement in general intellect and ability are very small due to any particular subject matter:

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[23] Ibid., pp. 66-68.

[24] Fearon, op. cit., pp. 21-22.

[25] Ibid., p. 21.

[26] Morris L. Bigge, Learning Theories for Teachers (New York: Harper and Row, 1964), p. 26.

[27] Ibid., p. 22.

[28] Ibid., p. 27.

[29] Ibid., p. 27.

> "Thorndike was convinced that the principal reason that good thinkers seemed to have been made good thinkers by certain subjects which they had pursued is that good students tend to take the subjects which people generally identify with good thinking. Good students gain more than do poor students from the study of any subject."[30]

What is critically important for curriculum researchers is, which learning theory contributes to maximum transfer? As Stratemeyer et al. stress in agreement with Thorndike,

> "Whether or not the study of geometry leads to better problem-solving ability seems to depend upon whether geometry is taught with problem-solving skills in mind."[31]

This is a very essential consideration. Do we need a purchasing law course or will the traditional business law course provide a carry over: this leads to the entire question of majors and specialized concentration. Gordon, Howell, Pierson and others seem to be very optimistic about the power of transfer and quite possibly would strongly agree with the generalization theory as described by Judd even though Judd is addressing himself to secondary education:

> "We cannot prepare young people specifically for the activities which they will have to take up in their mature lives. On the other hand, we must so direct education as to give pupils methods of intelligent adjustments of themselves to whatever conditions arise. This we can do by emphasizing broad principles and methods of analysis rather than particular items of knowledge."[32]

Judd stressed perception of a situation as essential to transfer and the modern-day Gestalt-field psychologists (Lewin, Tolman and Bruner) feel that transfer of learning depends on the perceptual similarities between two situations which make generalizations, concepts, insights and ability to solve problems transferable to different applications.[33]

Whether by design or omission, it must be concluded that the two major curriculum studies of business have either overlooked the purchasing field which means that it has made little impact on academia or that Gordon, Howell and Pierson assume a complete transfer of the principles of other broad subjects and that these subjects are sufficient education for the procurement field.

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[30] Ibid., p. 30.

[31] Florence B. Stratemeyer, Hamden L. Forkner, Margaret G. McKim and A. Harry Passow, Developing A Curriculum For Modern Living (New York: Bureau of Publications, Teachers College, Columbia University, 1957), 2nd ed., p. 73.

[32] Charles Hubbard Judd, Psychology of Secondary Education (New York: Ginn and Co , 1927), p. 441.

[33] Bigge, op. cit., p. 278.

THE COLUMBIA CASE

In one of the few published accounts of an actual curriculum revision in a school of business, the Columbia Graduate School of Business revision efforts from 1955-1960 are indeed relevant.[34] Started prior to the 1959 Ford and Carnegie reports, the case study represents an excellent application of recommendations of both reports. In the 1954-1955 academic year, 130 courses and 26 fields of specialization were offered in the Columbia Graduate Business School, including a major in industrial purchasing (with only a few students, 8 or 9).[35] By 1960, there were eight majors and just one purchasing course within the marketing department and approximately 46 key courses plus 8 core courses.[36] By 1968, the purchasing course had been dropped.[37]

In one of the Columbia Curriculum Committee reports which criticized the 1954-1955 period of narrow specialization and vocational subjects, the generalization theory is explicitly stated:

> "The development of disciplined intellectual power consisting of the power of observation and sustained attention; the power of analysis; the power of inference; the power to organize idea; the power of imagination and the power of judgment."[38]

Professor Howard T. Lewis, Professor Emeritus, Harvard University and pioneer purchasing educator agrees with the general approach:

> "There can be no doubt, for example, that the drive for degrees in purchasing is a mistake, since those we sell on offering such a degree will surely interpret this to mean further specialization. There is even less to be said for it since there is actually very little correlation between the business courses majored in at college and the actual occupation of alumni."[39]

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[34] Robert J. Senkier, Revising a Business Curriculum--The Columbia Experience (New York: Columbia University, 1961). (Prepared as partial fulfillment for the Ph.D. in education but again, there is no reference to education learning theory, psychology, etc.).

[35] Ibid., pp. 10-11, and 43.

[36] Ibid., pp. 101-118.

[37] Richard L. Pinkerton and W. Dale Greenwood, A Survey of Purchasing Education Courses . . . in the U.S. (New York: The National Association of Purchasing Management, 1968), p. 41.

[38] Ibid., p. 22.

[39] Howard T. Lewis, "Purchasing Education: What Kind Do We Want?,"

Harold A. Berry, at that time the General Chairman for N. A. P. M. Professional Development, stated in the Lewis article that the N. A. P. M. Professional Development Committee agreed with Professor Lewis: specialization should come after a student's basic or general business education.

Walter E. Willets reinforces Lewis, Berry, England and others referenced in this study.

> "Some people may ask why the colleges shouldn't be called on to provide education in specific purchasing subjects. The reason is that there is not enough demand for highly specialized courses. Our universities already have a proliferation of courses in real estate management and other fringe subjects which are beyond the scope of true academic learning. As a result, it's up to individual companies and associations to provide the specialized education. Where possible, however, they should rely on knowledgeable educators as instructors."[40]

POST-1959 DEVELOPMENTS

What has happened since the Ford and Carnegie studies of 1959? Most business schools and in particular AACSB members or candidates have reduced the number of majors, including over-specialization. They emphasize decision making within a framework of quantitative (computer, operations research, statistical analysis, and increased math requirements) and behavioral science with business and society a close third with attempts at the liberal-humanistic approach.[41, 42] We also find rather severe indictments of "some" professional business groups and associations for their attempts to "Pass their training responsibilities onto the academic community,"[43] and one Dean and former AACSB president places the blame for over-specialization on such groups.[44]

(Footnote 39 continued) Purchasing Magazine (Jan. 29, 1962), p. 71. Another purchasing leader also advises against a major: see Harold A. Berry, Purchasing News (July 27, 1959).

[40] Willets, op. cit., p. 91.

[41] American Association of Collegiate Schools of Business, A "Blue Skies" Look at . . . Schools of Business in 1970's (Carbondale, Ill.: Business Research Bureau, Southern Illinois University AACSB Mid Continent Conference, Oct. 27-28, 1966, 1966, 1967), pp. 15-17; 33-41; 45-47; 88-90.

[42] American Association of Collegiate Schools of Business, Views on Business Education (Chapel Hill, N. C.: School of Business Administration, University of North Carolina, 1960).

[43] John J. Clark and Blaise J. Opulente (eds.), Professional Education for Business (Jamaica, N.Y.: St. John's University Press, 1964), Vol. II, Thought Patterns, p. 9.

[44] American Association of Collegiate Schools of Business, (Carbondale, Ill., 1967), op. cit., p. 7.

This emphasis on quantitative tools and behavioral science is somewhat alarming to the devotee of classical-liberal education and they fear that a new specialization may be replacing the old vocational approach with a technical emphasis rather than a humanistic liberal focus.[45]

There has been some reaction to the anti-specialization movement since 1959 for three major reasons:

(1) An implied feeling that there is a specialized decision making process for specific situations. This is a pessimistic view of transfer generally expressed by the connectionists and other stimulus-response psychologists, such as Thorndike, Watson, Skinner, Hull, etc.[46]

> "Decisions rest not alone on the framework of the process, but also, and irrevocably, on competence in the area within which the decision is being formulated."[47]

(2) The executive-general manager curriculum will simply produce too many graduates for the number of available positions, i.e., most business school graduates will become staff specialists or functional managers; Gordon and Howell went too far in reducing specialization.[48]

(3) Specialization is good and a natural development of highly developed, affluent society and it is only bad if taught in a narrow and vocational manner.[49] In other words, the Gordon-Howell Pierson reports tend to "throw the baby out with the wash."

Professor Kiernam in the previously cited report from St. John's University offers a strong defense for purchasing and warrants a rather extensive quote:

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[45] William M. Kephart, James E. McNulty and Earl J. McGrath, Liberal Education and Business (New York: Bureau of Publications, Teacher's College, Columbia University, Institute of Higher Learning, 1963), p. 72.

[46] Bigge, op. cit., pp. 258-262, and 268-272.

[47] Clark and Opulente, op. cit., p. 17, comment by Prof. Charles J. Kiernam of St. John's University.

[48] Ibid., pp. 57-58; also see pp. 165-175 for a curriculum study of the college of Business Administration at St. John's University by Peter K. Ewald.

[49] Ibid., pp. 55-56. Also see p. 157 for comments by Ormsbee W. Robinson, Director of Educational Affairs, IBM who quotes Theodore M. Greene, a distinguished American philosopher: "It is an everlasting pity that so sharp a dichotomy has established itself in our minds between liberal education and vocational training, with the false implication that the former is somehow higher, though useless and the latter useful but somehow crass and demeaning."

> "The business core ought to contain a course in procurement as the functional area that offers the initial opportunity for profit. This basic course might carry the title, purchasing or procurement or in the light of current obeisance to management, it might be called materials management. This area of business activity, fraught as it is with high risk potentials, has not received in many circles the attention it properly warrants. This in part may be attributable to the inherent characteristics of the buying function which are, in the main, the obverse side of the coin whose reverse side is the selling function as found in marketing. The stores function, with its inventory problems in the raw materials and supply sectors lends itself readily as an area for the application of the more recently developed approaches to executive decision-making. Value analysis, a relatively new avenue to cost reduction, has characteristics that mark it as a process in which the decision-making function will occupy the principal setting.
>
> The characteristics of the procurement function in its relationship to vendors warrant the utilization of the descriptive process, rather than the analytical, in presenting the subject matter. To the extent that the purchasing function consists of dealing with people, to the degree the tools and techniques of psychology and sociology may be brought to bear in providing analytical content for the course material. The basic course in procurement is not merely concerned with what the procurement department does but rather it is concerned fundamentally, with the nature of costs incurred and the risks borne in the procurement and storeage of materials and supplies and in particular with the decision-making process that activates the acquirement and holding of inventory items."[50]

This quote is a unique and perceptive analysis of purchasing as an academic course and suggests that the field may have been victimized by poor quality course design in the past, the dominance of marketing (as has been suggested by others), the lack of awareness of the materials problem and opportunity by academic personnel or it might simply be a classic case of "I thought my colleagues covered those items in their courses" (and perhaps they do). Fred C. Foy, Chairman and President of Koppers Co., Inc., did include purchasing as a "major practical area of business" but this appears to be a rare case.[51]

There is evidence of bias in the Gordon-Howell/Pierson reports and others cited in this study for the following reasons:

(1) Both the Ford and Carnegie reports were partially based on samples of giant companies and top executives, i.e., companies with extensive professional in-service training programs for functional specialties and the executives obviously were and are concerned with general management, "the big picture."

(2) The authors admit a bias toward graduate schools and in particular, the

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[50] Ibid., pp. 45-56, quoted by permission of the author.

[51] American Association on Business Education, Views on Business Education, op. cit., p. 14.

private institution. They also seem to forget that not all institutions should or could have similar goals. They fail to consider the question of the special service obligations of state institutions.[52]

(3) Gordon, Howell and Pierson are professors of Economics, a field somewhat antagonistic towards business schools. Over the years, business professors broke away from the control of economics departments and formed their own schools. Also, economics emphasizes the macro-national income analysis and non-operational decision making so one could expect economics professors to endorse a broad, general program and object to business functionalism, which they rarely teach, probably never studied, and are generally prejudiced against.[53]

The real issue seems to be what facet of the purchasing jobs at the various levels is appropriately taught as foundation for entry versus what should be included in company training programs and formal adult education. The 1959 studies did provide guidelines for standards and it is appropriate to investigate in the next section, just what standards are currently being applied in the schools of business and then in later sections, how they affect the field of purchasing.

Business School Standards

The official U.S. accreditation organization is the American Association of Collegiate Schools of Business (AACSB, established, 1916). The current standards have just been issued and are dated 1968-1969 and should not be confused with the regional accreditation of the total university or college.[54] The standards appropriate for curriculum evaluation are numbers 3 and 4:

> Undergraduate standards:
>
> 3. "The curricula shall approximate, quantitatively, the standards in effect in recognized collegiate schools of business, due allowance being made for the meeting of regional or other special objectives. A portion of the four years of college work for the undergraduate degree may be taken in some other college, such as a liberal arts or an engineering college of approved standards. At least forty percent of the total hours required for the Bachelor's Degree must be taken in business and economics (usually 48 hours or 16 (3-hour) courses based on a 120 hour degree program); the major portion of the courses in this group shall be in business administration. At least forty of the total hours required for a Bachelor's Degree must be taken in subjects

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[52] American Association of Collegiate School of Business, A "Blue Skies" Look . . ., op. cit. Comments by Dean Schmeltz, p. 18.

[53] Clark and Opulente, op. cit., pp. 55-77. Comments by Ossian MacKenzie and Nathan A. Baily.

[54] American Association of Collegiate Schools of Business, Constitution, Bylaws and Accreditation Standards 1968-1969 (Cyril C. Ling, Executive Secretary), 101 North Skinker Blvd., Prince Hall, St. Louis, Missouri 63130.

> other than business and economics provided that economic principles and economic history may be counted in either the business or non-business groups (48 hours--16 courses or approximately 3 to 4 semesters). With respect to the latter, breadth, not specialization, is the objective. Credit for remedial courses of sub-collegiate level may not be considered toward meeting the standards of the Association."[55]
>
> 4. "As a foundation for training in business administration, instruction shall be offered in the fields of economics, accounting, statistics, business law or legal environment of business, business finance, marketing, and management. In general, candidates for the undergraduate degree shall receive basic instruction in each of these fields. Opportunities beyond the basic course shall be available in at least three of the above fields. However a proliferation of courses which might serve to diminish the effectiveness of the staff in meeting its obligations toward fundamental areas of training is not to be encouraged."[56]
>
> 10. "No institution subject to undue political influence may become or remain a member of affiliate member."[57]

While the above standards are general, we do see the direct limitation of specialization with no mention of either production or purchasing in the core area. Quite obviously, with a total number of business courses limited to a maximum of approximately 2-1/2 years, or 24 (3-hour) courses including seven core groups (usually two semesters of each core or 14 courses, ten courses still remain for major and minor fields, but subject to the broad anti-proliferation rule. However, the minimum business program is 48 hours or 16 courses and it would seem logical that the standards committee would look for a middle of the road--perhaps a 2-year program which would deter overspecialization. It must be remembered that individual courses are also examined by the AACSB undergraduate accreditation committee who could rule that a certain number of courses represent overspecialization.[58]

Graduate Standards

The Masters accreditation standards are very general. One requirement states:

> "Students in degrees programs in business either as undergraduate or as graduate students complete the equivalent of the undergraduate core as set forth in standards (4) of the Standards for Undergraduate Program Accreditation. . . . For the M.B.A. degree, it is expected that the program beyond the core shall be

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[55] Ibid., p. 17.

[56] Ibid., pp. 17-18.

[57] Ibid., p. 19.

[58] Ibid., pp. 8-9.

> broad in nature and aimed at general competence for overall management. For other master's degrees the limitation on specialization beyond the core will not apply."[59]

Apparently, a Master's degree in purchasing or materials management would be acceptable provided the core requirements are satisfied, but an M.B.A. degree in purchasing would not. The standards are even more general than the undergraduate degree which gives wide discretionary powers to the Accreditation of Masters Programs Committee.[60] However, the impression given is the desirability of a broad program and quality.[61] The conference proceedings of the AACSB referenced in foregoing sections of this research study indicate that specialization and majors are to be limited both for the undergraduate and graduate programs.

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[59] _Ibid._, p. 22.

[60] _Ibid._, p. 9.

[61] _Ibid._, p. 16.

CHAPTER IV

DEGREE AND NON DEGREE EDUCATIONAL PROGRAMS IN PURCHASING

This chapter will examine various examples of current purchasing undergraduate, graduate, and post-secondary two-year programs. Particular attention will be given to adult education programs offered by universities and N. A. P. M. Company training programs are also included to complete the survey of present purchasing educational opportunities.

FOUR YEAR COLLEGE AND GRADUATE PURCHASING CURRICULUMS

As previously noted in chapter I, Dr. Fearon's 1965 survey indicated that the AACSB member schools teaching purchasing between 1955 and 1965 declined from 72% (or 54 of the 76 members) in 1955 to 51% (or 58 of the 114 members) in 1965. Fearon also reports the number of AACSB schools offering more than one course as dropping from 11% in 1955 to 8% in 1965. Even more illuminating is the fact that comparison of the schools who were members in 1955 and 1965, "six times more schools dropped purchasing completely from their curricula than added it."[1]

In a 1968 study generally thought to have identified at least 95% of all credit purchasing courses in junior college, 4 year and graduate schools, 175 institutions definitely offered at least one identified purchasing course[2] and another 80 use a purchasing textbook but do not identify a separate course. More important, of the 126 AACSB members in 1967-68, 66 or 52% offer at least one purchasing materials management course and another 25 show no course but indicated that a purchasing text is being used either in non-credit extension courses or other related credit courses.[3]

Apparently the newer AACSB members are more inclined to teach purchasing even though a few old members have dropped the course since 1965. For instance, of the 39 schools gaining AACSB membership from 1955 to 1965, 25 or 64% offered at least one purchasing course; however, only 5 or 42% of the 11 schools added during 1965-1968 offered a course in purchasing.[4] It is difficult to determine whether another anti-specialization trend has developed, whether the AACSB membership is now expanding to schools not interested in purchasing or whether a shortage of purchasing professors exists. The Pinkerton-Greenwood survey cannot be utilized to ascertain the number of schools dropping vs. adding courses. Perhaps the major specialized course reduction occurred between 1955 and 1965 in response to the Ford-Carnegie studies. Only four schools could be identified as having an undergraduate purchasing major and only one with a graduate program. Of the 175 institutions with identified course offerings, 131 or 75% offered one course, 18% two courses and the remaining 7% up to 6 courses.[5] It is interesting to note that 26 or 15% of the 175 institutions are junior colleges and 2-year technical institutes.

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[1] Fearon, "Purchasing Education in Collegiate Schools of Business," op. cit., p. 26.

[2] Pinkerton and Greenwood, op. cit., p. 1.

[3] Ibid., p. 2.

[4] Ibid.

The IIT Case

By way of illustration, the Illinois Institute of Technology (IIT is not a member of AACSB) offers a Bachelor of Science in business and economics with a major in purchasing. The following purchasing courses are offered primarily in the evening:

Purchasing (3 hours)
Purchasing Problems (3 hours)
Buying From Specific Industries (3 hours)
(Governmental, institutional, hospital, food service)

The IIT program has 9 hours of required marketing while the marketing majors are not required to take any purchasing.[6]

The Bowling Green Case

Bowling Green University (AACSB member) has a procurement and materials management concentration within the management department. The following purchasing courses are offered:[7]

Procurement (3 hours) management of materials including process of buying and related functions

Procurement and Materials Management Problems (3 hours) A study in depth of techniques and problems in materials management. Examination of policy development, selection and evaluation of buyers, appraisal and development of suppliers and subcontractors and evaluation of performance.

The University of Wisconsin Case

The University of Wisconsin Business School (AACSB member and 2-year junior-senior business program) offers a field of purchasing concentration within the marketing major with the following electives--no specific number required:[8]

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[5] Ibid.

[6] IIT 1967-68 Bulletin, Chicago, Ill., p. 230.

[7] Bowling Green 1967-68 Bulletin, Bowling Green, Ohio, p. 163-164.

[8] School of Business, Announcement of Courses, 1968-70, Bulletin of the University of Wisconsin, Madison, Wisconsin, p. 27.

Cost Accounting (2 credits)

Business Law (3 credits) (beyond that required of all B.B.A. students; the course includes law relevant to: sales, real estate, personal property, corporate, etc.)

Employee Evaluation and Development (3 credits)

Production Planning and Contril (3 credits)

Physical Distribution Analysis (3 credits)

Introduction to Decision Theory (3 credits)

*Manufacturing Equipment and Materials (2 credits)

*Industrial Plan Design (3 credits)

*Work Design and Measurements (3 credits)

Ag. Econ.: Prices of Agricultural Products (3 credits)

**Contracts and Specifications (2 credits)

**Estimates and Costs (2 credits)

**Economic Selection (2 credits)

* = Mechanical Engineering   ** = Civil Engineering

The above courses are elective plus required courses in marketing management, marketing research, marketing communication plus core requirements of managerial accounting, corporation finance, business law, principles of business organization, marketing, business statistics plus courses in humanities, social studies, math and one course in industrial purchasing is available and would be taken by a student in the purchasing curriculum:

Industrial Purchasing (2 credits)
Procurement of goods by industry and government, selection of sources, quantity and quality of purchased goods, price determination, traffic writing, legal considerations, and internal control over purchasing activities.[9]

The George Washington Case

The most elaborate purchasing graduate degree program is offered in the area of Federal Procurement by George Washington University, School of Government and Business Administration in Washington, D.C. (not a member of AACSB). This institution also participates in the National Institute of Governmental Purchasing professional certification program.[10] The George Washington (GW) program is in cooperation with the National Law Center and offers the following specialized procurement courses:[11]

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[9] Ibid., pp. 47-48.

[10] The George Washington University Bulletin Undergraduate and Graduate Catalogue, 1968-1969, Washington, D.C., p. 141.

[11] Graduate Study in Procurement and Contracting, School of Government and Business Administration--in cooperation with the National Law Center: The George Washington University, Washington, D.C., a pamphlet, 1968.

Procurement and Contracting (3 credits)

Purchasing Principles and Practices (3 credits)

Government Contract Administration (3 credits)

Pricing and Negotiation (3 credits)

Procurement Data Management (3 credits)

Systems Procurement and Project Management (3 credits)

The GW program also requires course work in administration, quantitative analysis, human behavior, accounting, economics, law, management, etc.

The Harvard Case

Harvard University Graduate School of Business offers one purchasing course:

Industrial Procurement and Marketing (one semester)

> "The aim of the course is to study within one framework the industrial buyer-seller relationships. Starting with cases that consider the nature and scope of the procurement function, the course continues with discussions of the problems involved in the determination and the definition of proper quality; the relation of price to quality; determination of quantity; value analysis; inventory policy and control; source selection; and the control and evaluation of the procurement function. A second section of the course deals with the product-price-promotion strategy in industrial marketing and with the product service function. The course concludes with a series of cases on buyer-seller relations."[12]

Here is a course with a rather unique combination of industrial procurement and marketing but it does suggest a logical blend of both buying and selling. Moreover, there is great merit in the combination study of industrial marketing and purchasing. For instance, Kernan and Sommers classify industrial buyers according to the buyer's commitment to occupational role such as degree of creativeness and institutional role in terms of innovative, adaptive, and lethargic.[13] Quite obviously the future purchasing man should be aware of such roles and the resulting sales strategies used on buyers according to this classification.

The Stanford Case

The Graduate School of Business, Stanford University, also offers just one course:[14]

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[12] Official Register of Harvard University Graduate School of Business Administration, 1967-1968, Boston, Mass., p. 82.

[13] James B. Kernan and Montrose S. Sommers, "The Behavioral Matrix . . . A Closer Look at the Industrial Buyer," Business Horizons, Vol. 9, No. 2 (Summer, 1966), pp. 59-72.

[14] Degree Programs--Graduate School of Business, Stanford University, Stanford, Calif. (Palo Alto), 1967-68, p. 19.

Purchasing and Materials Management

> "The course explores the following methods of achieving cost savings through skillful purchasing; appropriate product specification; analytical techniques for selecting vendors; and the tactics most likely to secure the lowest total cost. Primary emphasis is given to obtaining vendor cooperation through negotiated contracts that are advantageous to both buyer and seller. The course stresses the practical aspects of business management in addition to the conceptual aspects of vendor motivation and control. To this end, great emphasis is placed on the development of effective and skillful negotiation techniques--techniques which are crucial to the successful operation of any business. Regardless of the field in which a student intends to work, a sound knowledge of purchasing principles will be valuable to him."[14]

The cases cited thus far represent just a few examples of collegiate purchasing courses at various levels along with the evidence that few schools offer a degree or major in purchasing with the majority having one or two courses within the general management or marketing majors.[15]

JUNIOR COLLEGES, TECHNICAL INSTITUTES AND POST-SECONDARY VOCATIONAL SCHOOLS

According to the U.S. Government there were 408 public and 277 (total 685) junior college type institutions operating in the U.S. during 1966-1967.[16] These institutions are defined as:

> "2 but less than 4 years of work beyond the 12th grade--includes junior colleges, technical institutes and normal schools offering at least a 2-year program of college level studies."[17]

They must also be accredited by a nationally recognized accrediting agency, by a state department of education or by a state university or have their credits accepted by at least three accredited institutions.[18]

Contrary to popular belief the quality of post-secondary school education often ranks equal to or on occasion superior to the 4 year school.[19] It must be noted that there are two basic programs, the pre-4 year preparatory or transfer curriculum and terminal studies with either certificates or associate degrees depending on the particular institution.

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[15] "Is Purchasing Education Worth It?," Purchasing Magazine (December 14, 1964), pp. 72-85. Dr. Ross Lovell of the University of Houston recommends one materials management course and a student internship program (cooperative work experience).

[16] Education Directory, 1966-1967, part 3, Higher Education, U.S. Dept. of Health, Education and Welfare, Office of Education, 1967 (Washington, D.C.: Government Printing Office).

[17] Ibid., p. 1.

[18] Ibid., p. 1.

[19] Pierson, op. cit., p. 646, Chapter by Leland L. Medsker.

As Medsker points out in the Pierson report:

> "In the preparation of workers for immediate employment, the junior college has a wide-open field and is bound neither to tradition nor to the influence of other institutions. Here it can, and to some extent does, play its own unique role."[20]

In a 1968 survey of purchasing education, five junior colleges had purchasing majors and a total of 42 offered purchasing courses.[21]

Purchasing is generally classified under distributive education, which is the marketing function including merchandising, retail and related general management studies.[22] The Vocational Education Act of 1963 now allows for federally financed courses at the post-secondary and adult programs on a fulltime basis.[23] Previous federal acts had primarily concentrated on secondary or high school level vocational training with part time employment requirements.[24] A detailed survey of vocational education programs and institutions is available but seems to understate the number of post-secondary purchasing courses; however, it is an excellent list of institutions.[25]

A recent directory of post-secondary marketing programs reminds businessmen that the institutions offering the programs are receptive and in fact dependent upon local industry cooperation and needs.[26] It would appear that local purchasing associations could utilize this educational opportunity, in particular the small firms.[27]

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[20] Ibid., p. 658.

[21] Pinkerton and Greenwood, op. cit. 26 identified their course; the other 16 did not.

[22] Harland E. Samson, Post-Secondary Distributive Education (Washington, D. C.), U.S. Department of Health, Education and Welfare, Office of Education--Vocational and Technical Education, undated, pp. 1-2 and 41.

[23] Grant Venn, Man Education and Work: Post-Secondary Vocational and Technical Education (Washington, D. C.: American Council on Education, 1964), p. 77.

[24] Ibid., p. 77.

[25] Directory-Vocational Educational Programs, 1966 (Center for Studies in Vocational and Technical Education, The University of Wisconsin, Madison, Wisconsin, Feb. 1968).

[26] Directory of Post-Secondary Retailing and Marketing Vocational Programs (Washington, D. C.: American Vocational Association, Inc., March 15, 1968).

[27] Ibid.

Purchasing Education for the Small Company

The literature does not support a plea for special education for the small vs. large company. The principles, techniques, tools, practices are the same, only the execution, choice of method and need changes but this does not alter the knowledge or skill requirement for the individual who is perhaps running a one-man department.[28]

One must be careful to not conclude that there is no merit in adult education seminars, etc., for purchasing personnel in small companies. The value in a homogeneous class of students has much merit from a communication and psychological standpoint; however, the course material should not change. In fact, a recent study by a purchasing agent for a small firm seems to verify the fact that value analysis, traveling requisitions, simplified paper flow systems, and inventory control techniques all have equal applicability but that perhaps more research as to how the small firm applies the techniques would be beneficial.[29] It seems that even the application would be far easier in a small firm than in a giant multi-company/multi-division or multi-plant company.

The Gordon-Howell/Pierson reports and other references previously cited are in uniform agreement concerning the need for continuing adult education.[30, 31] What is available in the purchasing field?

ADULT-CONTINUING EDUCATION FOR PURCHASING

It is important to define first what we mean by adult-continuing education and it begins with a definition of adult.

> "An adult is a person who has come into that stage of life in which he has assumed responsibility for himself and usually for others, and who has concomitantly accepted a functionally productive role in his community."[32]

Taken by itself, this definition would include credit and non-credit programs regardless of where and when they are offered. For purposes of this research, we will exclude most of the credit instruction, and all of in-service or company training. This section will concentrate on specific job related conferences, seminars and workshops usually of rather short duration (one day, three day, one week). Even credit courses offered to all students in colleges and universities involving a weekly sequence of classes are considered part of regular college instruction.

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[28] William N. Kinnard, Jr., How Small Manufacturers Buy (Storrs, Conn.: Business Dept., School of Business Administration, University of Connecticut, 1964). A study for the Small Business Administration.

[29] Noel Spanier, "Purchasing in Small Manufacturing Companies," Pacific Purchaser (April, 1968), pp. 28-31.

[30] Gordon, Howell, op. cit., p. 291.

[31] Lamar Lee, Jr., "Continuing Education is Essential," Purchasing Week (February 19, 1968), p. 36.

[32] Gale Jensen, A. A. Liveright, Wilbur Hallenbeck (eds.), Adult Education: Outlines of an Emerging Field of University Study (Washington, D.C.: Adult Education Association of the U.S.A., 1964), Coolie Verner, p. 29.

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Harvard, Arizona, Michigan State and other Institutions

The major purchasing executive course is held by Harvard Graduate School of Business in cooperation with N.A.P.M. This is a two-week summer residence non-credit program with the major emphasis on general executive topics--decision making, quantitative analysis, budgeting, human motivation, planning, policies and is restricted to managers with certain experience qualifications. There are also approximately 36 other university sponsored general executive development programs open to purchasing executives.[33]

N.A.P.M. also sponsors purchasing management seminars of one-week duration at Michigan State University, East Lansing, Michigan, Arizona State University, Tempe; University of Oklahoma, Norman; and another is planned for the University of North Carolina at Chapel Hill. These programs essentially apply various management techniques directly to the purchasing function, i.e., relationship of purchasing to the total firm, human relations of purchasing, purchasing fiscal management, forecasting, legal aspects of purchasing, computer utilization, etc. In other words, unlike the Harvard program, these one-week seminars talk about purchasing management problems. The important point is that executives must learn the distinction between an executive program for all functions and programs for management of particular functions.[34]

University of Wisconsin Management Institute

The University of Wisconsin Extension, Management Institute, in Madison, Wisconsin (UWMI) offers an entire series of yearly programs on a nationwide basis for purchasing executives, middle management and senior buyers.[35] Rather elaborate curriculum planning including surveys and advisory committees is performed for these programs and the UWMI offerings represent a good picture of current education needs.[36]

The 1968-1969 UWMI programs included:

A. Purchasing Management Conference Series
(one day each from October to May)
1. Materials Management
2. Finance for Purchasing Managers
3. Purchasing Participation in Product Development

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[33] Executive Development Programs: What the Colleges Offer," Business Management (October, 1967), pp. 50-56.

[34] Kenneth R. Andrews, The Effectiveness of University Management Development Programs (Boston: Division of Research, Harvard Business School, 1966).

[35] "New Look In Purchasing Education," Purchasing Magazine (March 27, 1961), pp. 82-83 and 144.

[36] William P. Stilwell, "Curriculum Planning for the Continuing Education of Purchasing Managers," Journal of Purchasing, Vol 1, No. 2 (August, 1965), pp. 31-40.

4. Negotiations
5. EDP Applied to Purchasing
6. Coordination and Communication

B. Institute and Seminars
   1. Two - Purchasing techniques
      3 days each; practices, tools, techniques, including negotiations, policies, procedures, forms, role of purchasing, etc.
   2. Executive Purchasing Seminar--Leadership
      3 days; human relations, motivation, communication, behavioral sciences, etc.
   3. Executive Purchasing Seminar--Administrative
      3 days; objectives, administrative planning, organizing and staffing, directing, delegating, coordinating and controlling.[37]
   4. Materials Management Seminar
      5 days; concepts and application
   5. Inventory Management Workshop
      3 days

Many other institutions (usually Extension Divisions) are active in adult purchasing education on a regional or state basis such as the University of Detroit, University of Colorado, Washington University in St. Louis, University of Dayton (Ohio), University of Tennessee (Knoxville), University of Miami in Coral Gables, Florida, Illinois Institute of Technology, University of Connecticut (Storrs), and American University in Washington, D. C.

American Management Association

A large number of purchasing programs are conducted throughout the U. S. by the American Management Association (AMA) with a headquarters building in New York City. Founded in 1923, the AMA is one of the largest private adult education organizations in the world. In 1967, AMA had 51, 000 members, 650 employees, 12 major educational facilities including locations in Canada, Belgium, Mexico and Brazil; conducted over 2, 000 conferences, seminars, schools, etc., for approximately 115, 000 attendees for a 1967 income of $19, 290, 541 on assets of $9, 533, 253.[38]

From May, 1968 to March, 1969, AMA conducted 77 purchasing programs in 26 different subject areas in New York, Chicago, Los Angeles, Dallas, and Atlanta (see Appendix A). Aside from the special courses in warehousing and transportation, the two programs which seem to fill a void are "Practical Policies, Procedures and Techniques of Purchasing For The Smaller Company" and "Fundamentals For The Newly Appointed Buyer, " both 3-day programs.

There are many other management education organizations in the field of purchasing education including the Industrial Education Institute of Boston, Materials

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[37] Roderick McQueen, "Executive Purchasing Seminar, " Modern Purchasing, Vol. 10, No. 3 (March, 1968), Toronto, Canada, pp. 50-54.

[38] American Management Association Forty-Fourth Annual Report, 1966-1967, New York.

Management Institute (strong in negotiation), Boston, including consultants such as E. Ralph Sims, Jr. and Associates, Lancaster, Ohio; Harbridge House, Inc., Boston, etc. However, N.A.P.M. with its 108 affiliated associations and special professional development committees leads the country in initiating and sponsoring purchasing education activities.

N.A.P.M.

N.A.P.M. has produced two major publications for national, district and affiliate professional development activities chairmen: one is called Continuing Education and the other Universities and Colleges Program. The continuing education manual has chapters entitled:

1. Need for Continuing Education "Pursuit of Excellence"
2. Continuing Education Planning
3. Planning Seminars, Workshops and Conferences
4. Planning Pre-Meeting Forums and Half-Day Workshops
5. Planning Purchasing Courses--Professional Educational Standards Program
6. Appendixes:
    a. Purchasing Courses in American Colleges
    b. Purchasing Courses in Local Associations
    c. Company Purchasing Training Programs
    d. Programmed Instruction Courses
    e. Business Games and Case Studies
    f. Colleges Conducting Regular Purchasing Seminars
    g. Other Organization Conducting Purchasing Seminars
    h. Library of Program Aids and N.A.P.M. Literature
    i. Suggested Library of Purchasing Publications
    j. Bibliography of Purchasing Literature

While this program is extensive and appears to represent the most comprehensive curriculum guide for purchasing, the major aspect is the National Association of Purchasing Management Professional Educational Standards Program of December, 1967. The program lists a detailed curriculum for self study, guides for colleges and universities, but the major purpose was to stimulate N.A.P.M. members to continue their education and obtain a certificate after completing 60 semester credit hours. The curious requirement is that the courses be for credit in accredited schools and all individuals with non-credit course work have to take equivalency examinations to receive credit for the course material.

The strange aspect is that the N. A. P. M. in effect established a regular college requirement of 60 credit hours including six courses in purchasing and materials management for personnel working full time and already in the field. This is hardly adult "continuing" education; no programs for this curriculum plan were organized by any college or university, and only one university in the U.S. has 6 purchasing courses. Just how an individual member in an area remote from an academic complex could ever complete this program is hard to say. Even for those individuals working in large cities with extensive college and university night programs (Chicago, New York, Milwaukee, Los Angeles, etc.) 60 hours of college work could take 4 or 5 years at 2 or 3 institutions. Another critical aspect of adult education is need and many individuals would have no real need and consequently little motivation to pursue a uniform curriculum. It is also questionable whether an association of any type can objectively and professionally develop and administer "equivalency examinations" of a college academic nature.

The other N. A. P. M. manual on Universities and Colleges Program is concerned with scholarships, faculty intern programs (faculty members work with a company in the summer), research and dissertation assistance, college courses, essay contests and other cooperative projects with colleges and universities. This is a worthwhile program and N. A. P. M. has 186 academic members to help guide and promote this interaction between the practitioner and the educator.[39]

The N. A. P. M. Guide To Purchasing is also an excellent source for adult education and inservice training; this manual contains articles on systems and procedures, management, self-development, special commodity-industry buying, ethics, decision making, inventory control, etc.[40] A number of training aids, cases, movies, role-playing problem kits, books, etc., are also available for training purposes.

N. A. P. M. affiliates use all of the resources mentioned to conduct a rather impressive array of adult programs from both a quality and quantity aspect. For example, the New York Affiliate Purchasing Management Association of New York (PMANY), has an elaborate education program including six evening non-credit courses at New York University's Management Institute, St. John's University and PMANY headquarters in the following subjects:[41]

Advanced Purchasing Techniques and Administration
Negotiation
General Purchasing Management
Manufacturing Processes
Computer Basics

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[39] "N. A. P. M. 's Academic Membership," The Bulletin of the National Association of Purchasing Management, Vol. XXXIX, Sec. Two, No. 20 (October 16, 1968), pp. 1-A to 3A.

[40] Marshall G. Edwards (ed.), Guide to Purchasing (New York: The National Association of Purchasing Agents--Now Management, June, 1965).

[41] "PMANY College -Level Courses," New York Purchasing Review, Vol. 13, No. 11, September, 1968, p. 16.

PMA NY also has a full range of all-day seminars, pre-meeting forums, workshops and monthly meetings.[42]

The Purchasing Agents Association of Los Angeles, in cooperation with the University of California Extension Division, Los Angeles, offers a non-credit Professional Designation in Purchasing which requires 5 purchasing courses including: fundamentals, advanced, mathematics of purchasing (financial, learning curves, inventory control, forecasting and operations research), legal and organization and management theory.[43] UCLA Extension also offers a certificate in business programs and advanced course in purchasing. The advanced course includes: management of major procurements and subcontract management, price and cost analysis plus four electives from the following: organization planning and control, defense contract types and incentive procurement procedures, marketing research techniques, office organization and management, work improvement principles and practices, production planning and control, government contract administration and principles and applications of value analysis.[44] The advanced purchasing program reflects the concentration of aero-space defense industries in the Los Angeles area.

The Harbridge Report and Other N. A. P. M. Studies

It is probably an understatement to comment that few individuals are deprived of opportunities for continuing their adult purchasing education.[45] In 1958, N. A. P. M. sponsored a research study performed by a consulting company and the results indicated that top management had little appreciation for the potential value of purchasing, that some purchasing agents had a restricted view of their jobs and would not qualify for materials management positions and that "yardsticks" to measure purchasing performance were needed.[46] The consultants then recommended a massive, national N. A. P. M. program of workshops to review their study, to train purchasing agents in performance evaluation, for joint executive-purchasing programs for mutual communication, and for the training of conference leaders for local N. A. P. M. affiliates. To date, N. A. P. M. has not acted upon this recommended program.

In a recent private survey by Mr. G. A. Fadler, a Vice President of Radio Corporation of America, the mail responses from key purchasing executives in 20 major U.S. firms indicate that "some" desire exists for more nationally sponsored

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[42] Ibid., p. 17-20.

[43] "Professional Designation In Purchasing Management," Purchasing Agents Association of Los Angeles, Los Angeles, Calif., no date.

[44] Ibid.

[45] George W. Baker, "International Survey of Purchasing Education," Journal of Purchasing, Vol. 3, No. 2 (May, 1967), pp. 44-61. Mr. Baker is President of the International Federation of Purchasing and Director of Purchasing, Port of New York Authority. The article points out the decentralized nature of the N. A. P. M. activities in the U.S., i.e., the 101 "locals" conduct the program with guidance from the national. In most of the foreign purchasing associations, the reverse is true.

[46] Gordon Burt Affleck, "A Plan To Achieve the Major Objectives of N. A. P. A.," Harbridge House, Inc. (Boston, Mass., April, 1958).

(by N.A.P.M.) programs run by a full time staff employed by N.A.P.M.[47]

The "Fadler-Raftery" survey as it is called, indicated a high degree of interest in educational programs in: EDP-computer, cost/price analysis, value analysis, negotiation, systems and subcontracting, materials management, foreign procurement, decision theory and other analytical techniques of problem solving, behavioral science applications to management, vendor selection, learning curve, make-lease or buy, incentive contracting, contract buying and integration with other functional areas.[48] This study indicates a wide divergence over whether N.A.P.M. should expend their own national programs, expand cooperation with AMA, or develop more college interaction but rather complete agreement as to the need for more advanced educational programs for new management and technical developments.

We have been discussing formal off-the-job adult education conducted by independent organizations, what about inservice or on-the-job training conducted by the company for its own purchasing employees?

COMPANY TRAINING PROGRAMS FOR PURCHASING PERSONNEL

On-the-job training is the primary method of improving job performance and the subordinate-manager relationship in terms of harmony, communication, delegation, appraisal, task assignments, coaching and other informal day to day personal contacts extremely important for employee development.[49] If this manager-subordinate relationship is healthy, then formal training has a proper environment in which to organize and build planned development for the new recruit and the current staff. It should be recognized that formal training and education cannot replace personal self-development.[50]

Purchasing executives have successfully used a wide variety of plans and methods including initial company and job orientation, rotating buying assignments, assignments in the plant and using departments, supplier visitations, special project assignments, reading lists, in-plant courses, regular conference meetings with role-playing, guest speakers, firms, and demonstrations.[51]

There is no substitute for astute and professional recruiting--particularly for the college graduate who is taking his first job, i.e., no amount of training or formal education will correct a good man improperly placed or hired for the wrong position. Raytheon has an elaborate college recruiting and screening program designed to attract high caliber graduates followed by a planned two year training program outlined in the procurement manual.[52] Raytheon plans 80% of the training for on-the-job assignments such as expediter-junior buyer with 20% of the time spent in observation of other business activities, special training sessions in quality control, and other company and outside seminars. All trainees attend a one-day meeting each quarter with the steering committee; in addition, special evaluation forms are completed by all trainers. For current personnel, Raytheon also contracted with a consulting firm to provide a two week seminar on subcontracting, a two-day procurement management seminar (held twice a year) and a one-day program for purchasing supervisors.

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[47] George A. Fadler, N.A.P.A. Professional Development and Review Committee, August 7, 1967 and September 5, 1967, November 22, 1967 and letter from C. R. Raftery to Fadler (at RCA in Camden, N.J.), August 31, 1967.

[48] Ibid.

[49] Norman C. Allhiser, "Development of Subordinates In Purchasing Management," Journal of Purchasing, Vol. 2, No. 2 (Mary, 1966), pp. 32-52.

[50] "The Buyer and Self-Development," Purchasing Magazine (September 19, 1968), pp. 197-198.

[51] "Practical Approaches to Purchasing--Special Report," Purchasing Magazine (March 20, 1969), pp. 63-70.

Many other large companies have developed special programs for the new man, primarily the college graduate and they all employ corporate orientation, visiting assignments at various plant locations, and special purchasing training; the RCA program is 26 weeks, the Ford program is one year.[53, 54]

A rather elaborate planned series of formal purchasing and materials management program are conducted by the Singer Company (headquarters staff and by local plant managers) including 5-day, and 2 2/2-day conferences and seminars on purchasing management, buying, production and inventory control, problem solving, communications, and performance standards for both the new and experienced employees.[55] Singer uses a wide variety of techniques, case studies, role-playing, forums, and extensive training manuals for use by local purchasing managers as well as the corporate directed programs to stress present techniques, broad management topics, and future requirements.

Negotiation "schools" utilizing case histories, role playing, video tape replay, etc., seem to be popular, in particular with companies heavily involved as prime and subcontractors for defense projects.[56]

Training programs can be quite concise and simple, yet effective; again, it depends on the needs of a firm. One firm uses round table discussions case histories in 45-minute to 90-minute sessions on ethics (5 sessions), vendor selection (3 sessions), expediting, communications, value analysis and how to deal with back-door selling.[57] The director of this program stresses short meetings to install enthusiasm and a relaxed informal atmosphere, which avoids testing.

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[52] Somerly Dowst, "Purchasing Training: Mortar Board to Management," Purchasing Magazine, pp. 46-48 (program developed by James Hill, Director of Procurement at Raytheon, Lexington, Mass.).

[53] David E. Reeves, "A Successful Purchasing Training Program for College Graduates" (RCA), Pacific Purchaser (June, 1968), p. 20.

[54] "Recruit 'em Right, Then Train 'em Right" (Ford), Purchasing Week (July 29, 1968), p. 19.

[55] "Training Hits Singer Buyers On All Levels," Purchasing Week (August 19, 1968), pp. 28-29.

[56] "Buyers Learn The Ropes At Negotiation School," Purchasing Week (August 12, 1968), pp. 38-40. (Honeywell's EDP Division, Brighton, Mass.)

[57] Thomas F. Dillon, "Riegel Program Stresses Fundamentals," Purchasing Magazine (November 4, 1965), pp. 75-78.

The Hyster Corporation offers 36 sessions, consisting of one hour every other week for their U.S. and overseas locations.[58] The topics include: preparing purchase orders, buyer-salesman relations, communications, material and inventory control, accounting, documentation-reporting, purchasing-engineering relations, coordinated purchases and sales, annual buying, small orders, purchasing policies-procedures, standardization, value analysis, military contracts, and law. Hyster had the help of a professor over a two-summer period under the N.A.P.M. faculty internship program to help develop training outlines and materials.

These examples of company training illustrate the importance of this facet of purchasing education and the value of having such programs organized via formal written plans and prepared materials. Certainly a large percentage of the purchasing training can and should be conducted by the company. Company training is a legitimate "cost of doing business" with educational experiences tailored for the firms' particular problems. If the programs are sound, well-executed and received by properly selected and placed personnel, the pay-off in increased productivity and reduced turnover should more than pay for the cost of training.

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[58] Herbert E. McLean, "They Call It Buyer Development," Purchasing Magazine (Nov. 4, 1965), pp. 79-82.

CHAPTER V

METHODOLOGY AND RESEARCH DESIGN

The literature review and analysis in chapters II-IV supported the need for a current empirical study of the purchasing function and the educational requirements in order to reach the objective of this study previously set forth. A combination of personal depth interviews with 75 purchasing experts (practitioners) and 15 leading purchasing educators, plus 65 mail questionnaires from a group of collegiate instructors of purchasing are the principal sources for this research. After the literature search and problem identification the following research steps (in sequence) were completed.

Exploratory Personal Interviewing

In February and March, 1968, thirteen test interviews with practitioners and educators were conducted in Milwaukee and New York. Three types of data collection forms were analyzed before the final instruments were prepared: see Appendix B for the practitioner and educator questionnaires used in this research. They are structured forms with a combination of closed and open end questions.

It was established that a three hour interview would be necessary with advanced respondent preparation.

The test interviewing verified the problem as stated in Chapter I, and established the feasibility of personal interviewing as a research method to correct the data. Respondents could and were willing to answer the questions and provide the data necessary for the interview.

RESPONDENT SELECTION

The following sources were used by the researcher to obtain a list from which to select respondents:

1. The 1967-1968 N. A. P. M. Professional Development and Review National Committee composed of distinguished purchasing leaders.

2. Current authors of articles, books and individuals recognized in various periodicals as successful and prominent.

3. The 1967-1968 Purchasing Management Advisory Committee of the University of Wisconsin Extension Management Institute, Madison, Wisconsin.

4. The 1967-1968 Purchasing Planning Council of the American Management Association, New York, New York.

5. Past contributors to purchasing research projects from 1958-1968.

6. Recommendations from respondents in the exploratory research and the final survey.

The following criteria was established to guide the actual selection from a list of 300 names suggested from the foregoing sources.

1. Persons in high executive purchasing positions in reputable and nationally known firms.

2. Persons with an interest in and experience with purchasing education such as members of various purchasing education advisory boards and N. A. P. M. educational committees.

3. Persons with foresight who would be capable of and willing to predict future trends as evidence by publications, speeches, N. A. P. M. positions and personal knowledge by the 1967-1968 N. A. P. M. Professional Development and Review National Committee.

4. Educators who teach purchasing, write in the field, serve on various N. A. P. M. committees, and who are active in adult purchasing education.

5. A final post-interview review and rating by the researcher as to the agreement with the criteria.

It should be emphasized that all respondents had to satisfy criteria numbers 2, 3 and 5; criterion number 1 applies to practitioners and number 4 to educators. An indication of respondent "quality" can be arrived at by the fact that the sample includes 30% of the 30 member American Management Association Purchasing Council, 68% of the 12 member University of Wisconsin Extension Management Institute Purchasing Advisory Committee, and 10 authors of the 14 leading books on purchasing. More data on the respondents are given in Chapter VI.

Interviewing started in March and ended in August, 1968. The final sample was composed of the following:

1. 75 practitioners including 70 individuals in 58 different firms plus 3 divisions or 61 separate companies; three editors, one consultant, and the executive director of N. A. P. M.

2. 15 educators from 15 different institutions.

This sample is a group of experts subjectively selected on the basis of judgment which is defined as "a sample in which sample members are selected according to some design other than probability selection."[1] It can also be described as a modified combination of descriptive research methods such as job analysis and case studies.[2]

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[1] Robert Ferber, Donald F. Blankertz and Sidney Hollander, Jr., Marketing Research (New York: The Ronald Press Company, 1964), p. 656.

[2] Deobold B. Van Dalen, Understanding Educational Research (Rev. ed.; New York: McGraw-Hill, Inc., 1966), pp. 210-211, 218-220.

While a judgment sample is not representative and inferential statistics cannot be used in this research, the object of the research was to solicit expert opinion from knowledgeable individuals as opposed to statistical sampling designed to estimate information representative of a universe. Aside from the source list developed for this study, there is no population list or universe of purchasing personnel which could be used for a national statistical sample. This situation is somewhat analogous to that reported by Van Dalen.[3] Even if such a universe list existed for a defined purchasing population, probability sampling, by mathematical definition, would necessarily include large numbers of respondents with no knowledge of purchasing education needs, trends and practices.

It is important to remember that in "expert" type samples, the individual is the primary basis for selection and he responds to questions on the basis of his expertise, not for the institution where he is employed.

The Educator Mail Survey

The results from the 15 personal educator interviews demonstrated the need for additional purchasing educators in the sample. The personal educator questionnaire was modified for use in a mail survey. Pretesting disclosed the necessary additional question explanations for a mail survey. Great care was exercised to prevent distortion of the same questions asked in the personal educator survey. This was accomplished so that the two educator samples could be compared and combined. A mail survey was used because of time and financial limitations.

The mailing sample was the 1968-1969 academic membership of N. A. P. M. which included 186 individuals.[4] While there is no indication as to what percentage of the total number of purchasing educators are members of N. A. P. M., the list is the only source of collegiate purchasing instructors in the U. S. In November, 1968, the first wave of questionnaires was sent to the entire N. A. P. M. academic membership with a second wave sent three weeks later to the first wave nonrespondents. By late December, 87 or 47% of the 186 members had responded. From this total of 87, 65 or 35% were acceptable for tabulation as 22 were either incomplete, marked "no opinion" or contained individuals no longer teaching or interested in purchasing education.

As previously stated, the objective was to obtain additional responses from concerned educators and not to obtain a representative sample of N. A. P. M. academic members. Like the personal sample, the mail respondents are a judgment sample and an expert group; no inferential statistics can be applied.

TREATMENT OF THE DATA

All of the questionnaires used in this research contain many common questions relating to: purchasing job descriptions, methods, academic courses, educational materials, company recruiting, selection and training procedures, N. A. P. M. educational activities, adult education, and educational philosophy.

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[3] Van Dalen, op. cit., pp. 369-270 by William J. Meyer.

[4] N. A. P. M.'s Academic Membership, The Bulletin of the National Association of Purchasing Management, Vol. XXXIX, Sec. 2, No. 20 (October 16, 1968).

The data are presented in the form of tables of opinion with routine frequence distributions showing simple measures of central tendency. Cross tabulations according to different respondents are presented when meaningful. In the words of Professor William J. Meyer:

> "Statistics are tools of research and should not be conceived as the end product of research. Thus if a simple measure of control tendency (mean, median or mode) answers the question, there is little merit in performing more complicated analysis for the sake of window dressing."[5]

Various purchasing job descriptions collected during the personal interviewing have been classified according to the major cognitive and affective domains:[6] see Appendix E for abbreviated descriptions of these classifications. This served to help identify the educational objectives of purchasing positions and to establish the sophistication level of the educational activity.

When appropriate, the primary data are integrated with the secondary data referenced in chapters II-IV. In some cases, only the secondary data are used to satisfy a particular objective or to support a finding or conclusion.

Limitations

There is no objective or quantitative method to factually establish that the sample is correct in size and composition. Certainly, all the experts are not included in this research; however, the multiple sources for the list produced a great deal of duplication which gives an indication of agreement. Since the researcher did not initially select the sample, nor is he a member of the purchasing profession, there is a minimum of bias or temptation to reach a preferred selection.

Many respondents were not able to answer selected questions. The analysis will show that this is, in itself, significant. Attempts by respondents to rate multiple choices including detailed job tasks, and techniques, were unsuccessful; they simply could not or would not perform ratings during the test interviews.

A few questions turned out to be confusing due to improper wording and they will be properly identified in the analysis segment of this study.

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[5] Van Dalen, op. cit., p. 330.

[6] Bloom, op. cit., pp. 201-207 and Krathwohl, Bloom and Masia, op. cit., pp. 176-185.

CHAPTER VI

FINDINGS

Prior to any description of the findings which relate to the objectives of this research, a detailed analysis of the educator and practitioner samples will be included. This is a necessary antecedent in order to help the reader understand the environment, background and experience which may be influencing the responses.

The rest of the chapter brings together both the practitioner and educator answers (when appropriate) to common questions according to the following sequential outline:

1. Purchasing organization and functions.
2. Position descriptions and job duties.
3. Purchasing methods, procedures and techniques.
4. Educational requirements.
5. Collegiate (2 years, 4 years and graduate credit purchasing courses).
6. Company in-service training (within the firm).
7. Adult education (outside the firm).
8. N.A.P.M. educational materials and programs.

Not all questions and comments sections were answered by enough respondents to warrant their inclusion in these findings. When a question is missing or no elaboration on "comments" is given, an explanation will be noted in the narrative of this chapter. Cross tabulations are summarized in narrative form, not in table format.

THE PRACTITIONER SAMPLE

The practitioner sample consists of 75 individuals representing 58 different firms, 3 publications, one consultant and one full time N.A.P.M. executive. It is important to understand that 58 firms and 3 separate divisions within the 58 give a total company sample of 61; therefore, the number 61 is really the maximum number of responses for questions relating to the practices of a firm. The entire sample of 75 is the appropriate maximum number of responses for general questions concerning opinions of the individual.

Table 1 reveals that 13% of the sample are vice presidents, 33% are directors of purchasing, 31% are managers, with the rest miscellaneous. They represent large firms. Table 2 shows that only 22% have less than 5,000 total employees and 27% are "giants" with at least 26,000 employees. The "giant" description holds true for the 1967 gross sales figures, as only 22% of the firms (including divisions) have sales of less than 199 million dollars (Table 3).

TABLE 1

PRACTITIONER SAMPLE

PURCHASING TITLES OF RESPONDENTS

Number Answering: 75 of 75 (100%)

Purchasing Title	Number of Responses	Percent of 75
President	2	3
Vice-President	10	13
Director of Purchasing	25	33
Assistant Director of Purchasing	2	3
General Manager	5	7
Manager	18	24
Assistant Manager	2	3
Purchasing Agent (PA)	6	8
Buyer	1	1
Executive Assistant	1	1
Editor	3	4
Total	75	100%

TABLE 2

PRACTITIONER SAMPLE

NUMBER OF TOTAL CORPORATION EMPLOYEES FOR 60 FIRMS

Number Answering: 60 of 61 (98%)

Number of Employees	Number of Responses	Percent of 60
100,000 - 364,999	6	10.0
50,000 - 99,999	6	10.0
30,000 - 49,999	8	13.3
26,000 - 29,999	2	3.3
20,000 - 25,999	2	3.3
15,000 - 19,999	2	3.3
12,000 - 14,999	6	10.0
10,000 - 11,999	5	8.3
7,000 - 9,999	7	11.7
5,000 - 6,999	3	5.0
2,000 - 4,999	3	5.0
1,500 - 1,999	4	6.7
1,000 - 1,499	3	5.0
450 - 999	2	3.3
Under 50	1	1.7
Total	60	100.0%*

*Rounded to 100.0%

TABLE 3

PRACTITIONER SAMPLE

1967 SALES REVENUES FOR 52 FIRMS

Number Answering: 52 of 58 (90%)

1967 Gross Sales (in millions of dollars)	Number of Responses	Percent of 52
11,000 - and up	1	1.9
5,000 - 10,999	2	3.8
3,000 - 4,999	2	3.8
2,000 - 2,999	4	7.7
1,000 - 1,999	6	11.5
800 - 999	5	9.6
500 - 799	2	3.8
400 - 499	5	9.6
300 - 399	3	5.8
200 - 299	7	13.5
100 - 199	4	7.7
70 - 99	3	5.8
50 - 69	3	5.8
20 - 49	5	9.6
Total	52	100.0%*

*Rounded to 100.0%

Purchasing is important in the firms as 43% indicate purchased materials and equipment and services (excluding media advertising, most sales promotion, insurance, legal, and other consulting fees) of 40 to 54% of the average sales dollar (Table 4). A total of 17,355 purchasing and materials management personnel of all types and levels were employed by 53 firms. Table 5 indicates a rather uneven distribution with 12% using over 1,000 purchasing employees and 33% using from 50 to 199; only 12% have fewer than 10.

The firms are primarily in the machinery, primary metals, fabricated metal products, transportation equipment, wholesale, petroleum, chemical, instrument, and printing-publishing industries (Table 6).

The respondents are divided between senior men with 44% having been with their company for 25 or more years and 38% who have less than 11 years with the firm (Table 7). However, all but 19% have 11 or more years purchasing experience and 46% have 21 or more years experience (Table 7). The typical age of the respondent is 50-54, with 66% in the 45-59 age bracket (Table 8).

Respondents are active in extracurricular purchasing activities; 92% are N.A.P.M. members and 3% are former members; 71% have held various N.A.P.M. offices. Out of 59 replies, 37% have taught purchasing in a formal college credit class situation and 52% of 57 have authored purchasing articles and books.

TABLE 4

PRACTITIONER SAMPLE

PERCENTAGE OF THE SALES DOLLAR REPRESENTED BY MATERIALS AND SERVICES PROCESSED BY THE PURCHASING DEPARTMENT

Number Answering: 54 of 61 (89%)

Purchased Materials as a Percent of the Sales Dollar	Number of Responses	Percent of 54 Firms
84 - 80	2	4
79 - 75	0	0
74 - 70	0	0
69 - 65	1	2
64 - 60	2	4
59 - 55	5	9
54 - 50	8	15
49 - 45	6	11
44 - 40	9	17
39 - 35	3	6
34 - 30	5	9
29 - 25	5	9
24 - 20	3	6
19 - 15	1	2
14 - 10	3	6
9 - 5	1	2
4 - 0	0	0
Totals	54	100%

TABLE 5

PRACTITIONER SAMPLE

TOTAL NUMBER OF PERSONS ENGAGED IN PURCHASING IN 52 FIRMS

Number Answering: 52 of 61 (85%)

No. of Purchasing Employees	Number of Responses	Percent of 52
2,500 and up	1	1.9
1,000 - 2,499	6	11.5
500 - 999	5	9.6
300 - 499	4	7.7
200 - 299	0	0.0
100 - 199	9	17.3
50 - 99	8	15.4
25 - 49	4	7.7
20 - 24	4	7.7
10 - 19	5	9.6
5 - 9	4	7.7
0 - 4	2	3.8
Total Number of Firms	52	100.0%*

*Rounded to 100.0%

NOTE: Many firms with fewer than 19 purchasing employees are staff groups or divisions of larger firms, etc.

TABLE 6

PRACTITIONER SAMPLE

STANDARD INDUSTRIAL CLASSIFICATION CODE BREAKDOWN OF 56 FIRMS

Number Answering: 56 of 58 (96%)

SIC Codes (two digit)		Number of Responses	Percent of 56
36	Electrical Machinery, Equipment and Supplies	21	37.5
35	Machinery, Except Electrical	15	26.8
33	Primary Metal Industries	10	17.9
34	Fabricated Metal Products, Except Ordnance, Machinery and Transportation Equipment	8	14.3

TABLE 6 (Continued)

SIC Codes (two digit)		Number of Responses	Percent of 56
37	Transportation Equipment	8	14.3
50	Wholesale	7	12.5
29	Petroleum Refining and Related Industries	5	8.9
28	Chemicals and Allied Products	5	8.9
38	Professional and Scientific Instruments	4	7.1
27	Printing, Publishing and Allied Industires	4	7.1
13	Crude Petroleum and Natural Gas	3	5.4
20	Food and Kindred Products	3	5.4
30	Rubber and Miscellaneous Plastic Products	3	5.4
32	Stone, Clay, and Glass Products	3	5.4
22	Textile Mill Products	2	3.6
39	Miscellaneous Manufacturing	2	3.6
46	Pipeline Transportation	2	3.6
15	Building Construction--General Contractors	1	1.8
16	Construction Other Than Building Construction--General Contractors	1	1.8
19	Ordnance and Accessories	1	1.8
21	Tobacco Manufacturers	1	1.8
23	Apparel and Other Finished Products Made From Fabrics and Similar Materials	1	1.8
24	Lumber and Wood Products, Except Furniture	1	1.8
25	Furniture and Fixtures	1	1.8
26	Paper and Allied Products	1	1.8
44	Water Transportation	1	1.8
55	Auto Gasoline Dealers	1	1.8
53	General Merchandise	1	1.8

Totals Exceed 100%: Multiple Answers

TABLE 7

PRACTITIONER SAMPLE

NUMBER OF YEARS SERVICE WITH PRESENT COMPANY AND NUMBER OF YEARS PURCHASING EXPERIENCE

Number Answering: 65 of 70 (93%)

Number Years With Corp.	Number of Responses	Percent of 65	Total Years in Purchasing	Number of Responses	Percent of 66
31 or more	12	18.5	31 or more	7	10.6
26 - 30	8	12.3	26 - 30	12	18.2
21 - 25	8	12.3	21 - 25	11	16.7
16 - 20	6	9.2	16 - 20	12	18.2
11 - 15	7	10.8	11 - 15	12	18.2
6 - 10	12	18.5	6 - 10	7	10.6
2 - 5	8	12.3	2 - 5	4	6.1
One or less	4	6.2	One or less	1	1.5
Total	65	100.0%*	Total	66	100.0%*

*Rounded to 100.0%

TABLE 8

PRACTITIONER SAMPLE

AGE OF RESPONDENTS

Number Answering: 67 of 75 (89%)

Age	Number of Responses	Percent of 67
75 - 70	1	1.5
69 - 65	0	0.0
64 - 60	10	14.9
59 - 55	10	14.9
54 - 50	22	32.8
49 - 45	12	17.9
44 - 40	9	13.4
39 - 35	2	3.0
34 - 30	1	1.5
Total	67	100.0%

All respondents have a high school diploma and 77% have at least one college degree (Table 9); most of the undergraduate degrees are in science or arts with only 12% holding undergraduate engineering degrees. Of the 26% or 18 who hold graduate degrees, 60% are masters of Business Administration. Only 16% or 57 said they took a purchasing course while in college.

TABLE 9

PRACTITIONER SAMPLE

EDUCATION BACKGROUND OF RESPONDENTS

Number Answering: 70 of 75 (93.3%)

Education Level	Number of Responses	Percent of 70
High school diploma	70	100.0
Undergraduate degree	54	77.1
Graduate degree*	18	25.7
Some college	9	12.8

Total exceeds 100%: Multiple answers

*Includes those with undergraduate degrees, i.e., 77% have at least one college degree.

In summary, the practitioner sample is composed of mature, educated and senior purchasing executives who are active in the purchasing professional society and who work in large manufacturing (most in metal-working) firms where purchasing is an important activity.

THE EDUCATOR SAMPLE

This sample consists of 65 in a mail survey and 15 from personal interviewing for a total of 80. When appropriate, the tables are separated into mail, personal, and total.

Table 10 indicates that 61% of the 80 institutions have both undergraduate and graduate business programs; only 3 have only a Graduate School and 6 are junior colleges. Of the 80, 39% are private and 61% are state supported. Table 11 indicates that all but 2 eligible schools--both junior colleges--are accredited by university accrediting associations and 49% also have their business schools accredited by AACSB, the American Association of Collegiate Schools of Business.

The institutions in the personal sample are generally large with a mode enrollment of 10-12,999 and a mean of 19,373 (Table 12). The institutions in the mail sample are smaller with a mode of 1-3,000 and a mean of 11,475 (Table 12). However, 43% of the entire sample of 80 have total enrollments of 10,000 or more. Table 13 gives the mean undergraduate business school enrollment as 1532 for the mail and 1682 for the personal sample. The total Graduate Business School enrollment mean for the personal is 169 for the mail and 422 for the personal sample (Table 14). However, only 46% of the mail respondents gave business school enrollments and the figures must be used with caution.

TABLE 10

EDUCATOR SAMPLE

QUESTION: HOW WOULD YOUR INSTITUTION BE CLASSIFIED IN TERMS OF THE FOLLOWING CATEGORIES?

Number Answering - Mail Questionnaire: 65 of 65 (100.0%)

Number Answering - Personal Interview: 15 of 15 (100.0%)

	MAIL		PERSONAL		TOTAL	
Category of Institution	Number of Responses	Percent of 65	Number of Responses	Percent of 15	Number of Responses	Percent of 80
Junior College (2 years)	6	9.2	-	----	6	7.5
Graduate Business School only	-	----	3	20.0	3	3.8
Undergraduate Business School only	20	30.8	-	----	20	25.0
Both Under and Graduate Business School	37	56.9	12	80.0	49	61.3
Adult education division - university affiliated	1	1.5	1	6.7	2	2.5
Private	24	36.9	7	46.7	31	38.8
State Support	41	63.1	8	53.3	49	61.2

Totals exceed 100%: Multiple answers.

TABLE 11

EDUCATOR SAMPLE

QUESTION: BY WHOM ARE YOU ACCREDITED?

Number Answering - Mail Questionnaire: 65 of 65 (100.0%)

Number Answering - Personal Interview: 15 of 15 (100.0%)

Accrediting Associations	MAIL Number of Responses	 Percent of 65	PERSONAL Number of Responses	 Percent of 15	TOTAL Number of Responses	 Percent of 80
AACSB	29	44.6	10	66.6	39	48.7
North Central	21	32.3	5	33.3	26	32.5
Southern	17	26.1	1	6.6	18	22.5
Middle States	9	13.8	3	20.0	12	15.0
Western	6	9.2	3	20.0	9	11.3
Northwest	5	7.6	-	----	5	6.2
New England	3	4.6	2	13.3	5	6.2
Not eligible for accreditation	1	1.5	1	6.6	2*	2.5
Not accredited	2	3.1	-	----	2	2.5

Totals exceed 100.0%: Multiple answers.

Source: A. Lovejoy's College Guide, 1968

B. Directory of Members, Officers, Committees of the American Association Collegiate Schools of Business, 1967-1968. (AACSB)

* Figure includes two extension divisions.

TABLE 12

EDUCATOR SAMPLE

QUESTION: WHAT IS YOUR TOTAL SCHOOL ENROLLMENT?

Number Answering - Mail Questionnaire: 65 of 65 (100.0%)

Number Answering - Personal Interview: 15 of 15 (100.0%)

	MAIL		PERSONAL		TOTAL	
Enrollment	Number of Responses	Percent of 65	Number of Responses	Percent of 15	Number of Responses	Percent of 80
Over 45,000	-	----	1	1.5	1	1.2
43 - 45,999	1	1.53	-	----	1	1.2
40 - 42,999	1	1.53	-	----	1	1.2
37 - 39,999	1	1.53	-	----	1	1.2
34 - 36,999	-	----	-	----	-	----
31 - 33,999	1	1.53	-	----	1	1.2
28 - 30,999	1	1.53	-	----	1	1.2
25 - 27,999	2	3.07	2	13.3	4	5.0
22 - 24,999	1	1.53	1	6.6	2	2.5
19 - 21,999	2	3.07	1	6.6	3	3.7
16 - 18,999	6	9.23	1	6.6	7	8.7
13 - 15,999	7	10.7	2	13.3	9	11.2
10 - 12,999	7	10.7	5	33.3	12	15.0
7 - 9,999	9	13.8	1	6.6	10	12.5
4 - 6,999	5	7.6	-	----	5	6.2
1 - 3,999	18	27.6	-	----	18	22.5
Less than 1,000	1	1.53	-	----	1	1.2
Not Applicable	2**	3.07	1**	6.6	3	3.7
Total	65	100.0%*	15	100.0%*	80	100.0%*

Mail Questionnaire: Mode = 1-3000 · Mean = 11,475

Personal Interview: Mode = 10-12,999 · Mean = 19,373

* Rounded to 100.0%
** Extension programs

TABLE 13

EDUCATOR SAMPLE

QUESTION: WHAT IS YOUR FULL TIME UNDERGRADUATE BUSINESS SCHOOL ENROLLMENT?

Number Answering: Mail Questionnaire: 53 of 65 (81.5%)

Number Answering: Personal Interview: 15 of 15 (100.0%)
Total: 68 of 80 (85%)

Enrollment (In Hundreds)	MAIL Number of Responses	Percent of 53	PERSONAL Number of Responses	Percent of 15	TOTAL Number of Responses	Percent of 68
Over 3600	4	7.5	-	----	4	5.8
3400 - 3599	-	----	1	6.6	1	1.4
3200 - 3399	1	1.8	-	----	1	1.4
3000 - 3199	2	3.7	-	----	2	2.9
2800 - 2999	1	1.8	1	6.6	2	2.9
2600 - 2799	2	3.7	-	----	2	2.9
2400 - 2599	1	1.8	-	----	1	1.4
2200 - 2399	1	1.8	2	13.3	3	4.4
2000 - 2199	1	1.8	1	6.6	2	2.9
1800 - 1999	3	5.6	-	----	3	4.4
1600 - 1799	1	1.8	1	6.6	2	2.9
1400 - 1599	1	1.8	-	----	1	1.4
1200 - 1399	5	9.4	1	6.6	6	8.8
1000 - 1199	6	11.3	-	----	6	8.8
800 - 999	3	5.6	-	----	3	4.4
600 - 799	4	7.5	-	----	4	5.8
400 - 599	3	5.6	-	----	3	4.4
200 - 399	9	16.9	2	13.3	11	16.1
Below 199	3	5.6	1	6.6	4	5.8
No Undergraduate School	-	----	3	20.0	3	4.4
Not Applicable	2	3.7	2	13.3	4	5.8
Total	53	100.0%*	15	100.0%*	68	100.0%*

Mail Questionnaire: Mode = 200 - 399 - Mean = 1532

Personal Interview: Mode = No Undergraduate School - Mean = 1682

* Rounded to 100.0%

TABLE 14

EDUCATOR SAMPLE

QUESTION: WHAT IS YOUR FULL TIME GRADUATE BUSINESS SCHOOL ENROLLMENT?

Number Answering - Mail Questionnaire: 30 of 65 (46. 1%)

Number Answering - Personal Interview: 15 of 15 (100. 0%)

Total: 45 of 80 (56. 3%)

Enrollment (In Hundreds)	MAIL Number of Responses	MAIL Percent of 30	PERSONAL Number of Responses	PERSONAL Percent of 15	TOTAL Number of Responses	TOTAL Percent of 45
Over 800	1	3. 3	2	13. 3	3	6. 6
750 - 799	-	----	-	----	-	----
700 - 749	-	----	-	----	-	----
650 - 699	-	----	1	6. 6	1	2. 2
600 - 649	-	----	1	6. 6	1	2. 2
550 - 599	-	----	-	----	-	----
500 - 549	1	3. 3	-	----	1	2. 2
450 - 499	-	----	1	6. 6	1	2. 2
400 - 449	-	----	-	----	-	----
350 - 399	2	6. 6	-	----	2	4. 4
300 - 349	2	6. 6	-	----	2	4. 4
150 - 299	5	16. 6	3	20. 0	8	17. 7
100 - 149	5	16. 6	-	----	5	11. 1
50 - 99	4	13. 3	2	13. 3	6	13. 3
Below 49	8	26. 6	2	13. 3	10	22. 2
Yes, No figure	-	----	2	13. 3	2	4. 4
Not Applicable	2	6. 6	1	6. 6	3	6. 6
Total	30	100. 0%*	15	100. 0%*	45	100. 0%*

Mail Questionnaire: Mode = Below 49 - Mean = 169

Personal Interview: Mode = 150 - 299 - Mean = 422

* Rounded to 100. 0%

Regarding the individuals who responded, the data reveal that 76% have business school professorial rank, 22% are department chairmen, and 11% are deans. The data shows that 60% of the 80 are from 45 to 59 years old. They have considerable experience; 54% of the total currently teach purchasing and another 27% did at one time. Of the 65 who teach or have taught purchasing, 47% have taught for 12 or more years and another 17% for 7 to 10 years (Table 15). Only 20% would be considered "new" with just one to two years teaching experience.

Concerning their total experience with purchasing (consulting, teaching, on the job), 31% have 11 or more years experience and 69% have less than 11 years experience including 20% with 1 year or less and 8% with no direct experience (Table 16). There may have been some confusion over this question in the mail survey as to just what was meant by "experience"; the 5 who replied "none" may have thought it meant direct company experience.

TABLE 15

EDUCATOR SAMPLE

QUESTION: HOW MANY TOTAL YEARS HAVE YOU TAUGHT PURCHASING?

Number Answering - Mail Questionnaire: 51 of 52 (98%)

Number Answering - Personal Interview: 9 of 13 (69%)
Total: 60 of 65 (92%)

	MAIL		PERSONAL		TOTAL	
Years	Number of Responses	Percent of 51	Number of Responses	Percent of 9	Number of Responses	Percent of 60
More than 20	3	5.9	-	----	3	5.0
19 - 20	5	9.8	1	11.1	6	10.0
17 - 18	1	2.0	-	----	1	1.7
15 - 16	2	3.9	1	11.1	3	5.0
13 - 14	2	3.9	1	11.1	3	5.0
11 - 12	3	5.9	-	----	3	5.0
9 - 10	4	7.8	1	11.1	5	8.3
7 - 8	3	5.9	2	22.2	5	8.3
5 - 6	8	15.7	2	22.2	10	16.7
3 - 4	8	15.7	1	11.1	9	15.0
1 - 2	12	23.5	-	----	12	20.0
Total	51	100.0%	9	100.0%*	60	100.0%

* Rounded to 100.0%

TABLE 16

EDUCATOR SAMPLE

QUESTION: HOW MANY TOTAL YEARS EXPERIENCE HAVE YOU HAD WITH PURCHASING?

Number Answering - Mail Questionnaire: 54 of 65 (83.0%)

Number Answering - Personal Interview: 12 of 15 (80.0%)

Total: 66 of 80 (82.5%)

	MAIL		PERSONAL		TOTAL	
Years	Number of Responses	Percent of 54	Number of Responses	Percent of 12	Number of Responses	Percent of 66
More than 20	3	5.5	2	16.6	5	7.5
19 - 20	5	9.2	1	8.3	6	9.0
17 - 18	1	1.8	-	----	1	1.5
15 - 16	2	3.7	3	25.0	5	7.5
13 - 14	2	3.7	-	----	2	3.0
11 - 12	3	5.5	1	8.3	4	6.0
9 - 10	4	7.4	1	8.3	5	7.5
7 - 8	3	5.5	1	8.3	4	6.0
5 - 6	8	14.8	-	----	8	12.1
3 - 4	8	14.8	2	16.6	10	15.1
1 - 2	12	22.2	-	----	12	18.1
Less than 1	-	----	1	8.3	1	1.5
None directly	5	9.2	-	----	5	7.5

Totals exceed 100.0%: Multiple answers.

Table 17 indicates that 61% have taught purchasing at the "adult" level and this should count as part of the total purchasing experience.

Of course, all 80 individuals hold college degrees including 94% with Masters and 58% with Ph.D.'s; 73% have authored books in the general business and purchasing area; 14 of the leading purchasing textbook authors are in the sample.

PURCHASING ORGANIZATION AND FUNCTIONS

Purchasing organizations in the sample report to very high levels within their corporations; 17% report to the president and another 68% report to a vice president (Table 18). The most common function supervising purchasing is manufacturing (20%) but the table reflects great diversity within the firms.

Table 19 reflects the major purchasing responsibilities divided by plant, corporate and shared (both) authority levels. The firms have obviously concentrated the major purchasing activities at the corporation headquarters level in order to achieve maximum standardization and combined volume purchase of common items; in particular, office equipment (45% retain authority at headquarters). Only 16% of the 56 reporting firms and divisions have total inventory control with raw material being

TABLE 17

EDUCATOR SAMPLE

QUESTION: HAVE YOU EVER TAUGHT PURCHASING AT THE ADULT LEVEL? IF YES, WHERE, WHEN, AND TYPE PROGRAM?

Number Answering - Mail Questionnaire: 63 of 65 (96.9%)

Number Answering - Personal Interview: 12 of 15 (80.0%)
Total: 75 of 80 (93.7)

	MAIL		PERSONAL		TOTAL	
Answers	Number of Responses	Percent of 63	Number of Responses	Percent of 12	Number of Responses	Percent of 75
Yes	34	53.9	12	100.0	46	61.3
No	28	44.4	--	-----	28	37.3
Don't know	1	1.5	--	-----	1	1.3
Total	63	100.0%*	12	100.0%*	75	100.0%*

* Rounded to 100.0%

the most common area (20%) and virtually all of the duty is reserved for corporation headquarters control. Between a quarter and one-third are responsible for stores, receiving-shipping, traffic, value analysis (present product redesign for cost improvement) and value engineering (new product cost reduction). Very few (9%) are responsible for production control and quality control (2%). A few more (16%) use systems contracting described by Bolton as "A systems contract is a total corporate technique designed to assist the buyer and seller to improve the reordering of repetitive-use materials or services with an absolute minimum of administrative expense and with the maintenance of adequate business controls."[1]

Materials Management

While 30% of the firms state they employ the materials management concept, only 20% appear to completely satisfy the definition of the concept by including production and inventory control. However, 55% of 60 respondents indicate they believe that purchasing will evolve into the materials management concept (table 20). The reasons given in Table 20 indicate that 6 respondents believe materials management is a logical combination of like functions with resulting economic and control advantages. It is important to note that 6 believe a firm can have the concept without production control and 3 feel computers will stimulate a systems approach versus a functional organization.

Only 12 comments were given by those who do not feel purchasing will evolve into materials management and 13 comments came from those who feel "it depends".

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[1] Ralph A. Bolton, Systems Contracting: A New Purchasing Technique" (New York: The American Management Association, 1966), p. 14.

TABLE 18

PRACTITIONER SAMPLE

QUESTION: WHO DOES THE TOP PURCHASING EXECUTIVE REPORT TO?

Number Answering: 59 of 61 (97%)

Purchasing Reports To	Number of Responses	Percent of 59
President	10	17
Vice President - Manufacturing	9	15
Vice President - Operations	8	14
Senior - Executive Vice President	6	10
Vice President - Finance, Controller, Treasurer	4	7
Group Vice President	3	5
Vice President - Miscellaneous	3	5
Vice President - Administration	3	5
Director - Manager Administration and Services	3	5
Vice President - Engineering	2	3
General - Division Manager	2	3
Director of Manufacturing	2	3
Vice President - Marketing	1	2
Vice President and General Manager	1	2
Manager - Planning and Analysis	1	2
General Manager of Manufacturing Services	1	2
Total	59	100.0%

NOTE: The Manufacturing function at all levels is the most typical responsible function, 20%

TABLE 19

PRACTITIONER SAMPLE

QUESTION: WHAT ARE THE MAJOR RESPONSIBILITIES OF YOUR PURCHASING ORGANIZATION, ACCORDING TO PLANT VS. CORPORATE PURCHASING OR HEADQUARTERS AUTHORITY?

Number Answering: 56 of 61 organizations (92%)

A. Responsibilities Purchasing	Plant Authority		Corporate Headquarters Authority		Both		Total	
	Number of Responses	Percent of 56	Number of Responses	Percent of 56	Number of Responses	Percent of 56	Number of Responses	Percent of 56
Maintenance Repair & Operating (MRO)	13	23	19	34	23	41	55	98
Office Equipment	11	20	25	45	17	30	53	95
Corporation Research and Development	8	14	17	30	9	16	34	61
Capital Equipment	7	13	22	39	21	38	50	89
Raw Materials	7	13	19	34	18	32	44	79
International	4	7	18	32	9	16	31	55
Special Government	4	7	9	16	6	11	19	34

Totals exceed 100. %; Multiple Answers

Miscellaneous (packaging, resale, sub contracts, point of purchase advertising, etc.) a total of 5

NOTE: 49 firms or 88% assign buyers according to commodities, 3 by end prodict, 2 by division, 2 by department, 2 by project and 1 by function.

TABLE 19 (Continued)

B. Inventory Control	Plant		Corporation		Both		Total	
	Number of Responses	Percent of 56	Number of Responses	Percent of 56	Number of Responses	Percent of 56	Number of Responses	Percent of 56
Total (all areas)	3	5	3	5	3	5	9	16
Raw materials or parts	2	4	6	11	3	5	11	20
Semi-finished (work in process)	1	2	-	--	1	2	2	4
Finished goods	1	2	-	--	-	-	1	2

Totals exceed 100.0%; Multiple answers

C. Other Major Duties	Plant		Corporation		Both		Total	
	Number of Responses	Percent of 56	Number of Responses	Percent of 56	Number of Responses	Percent of 56	Number of Responses	Percent of 56
Stores	9	16	4	7	5	9	18	32
Receiving	6	11	5	9	5	9	16	29
Shipping	5	9	5	9	5	9	15	27
Traffic	5	9	7	13	6	11	18	32
Value Analysis	5	9	8	14	9	16	22	39
Value Engineering	4	7	5	9	5	9	14	25
Production Control	2	4	-	--	3	5	5	9
Quality Control	1	2	-	--	-	--	1	2
Systems Contracting	1	2	6	11	2	4	9	16

Totals exceed 100.0%; Multiple Answers

Miscellaneous (reclamation, salvage etc. = no count)

TABLE 19 (Continued)

	Plant		Corporation		Both		Total	
	Number of Responses	Percent of 56	Number of Responses	Percent of 56	Number of Responses	Percent of 56	Number of Responses	Percent of 56
D. No Buying etc.							2	4

(Only consulting for divisions, plants, subsidiaries, etc.)

E. Materials Management; 17 firms or 30% state they employ the materials management concept and organization "at various plants" within their corporation; however, only 11 or 20% appear to have the complete concept including production control.

Both the negative and conditional remarks were of a wide variety including: control is not necessary, coordination can do the same thing; purchasing is still a separate and specialized function, materials management groups too many major functions in one department; its ok for assembly type operations but not for firms with major machining tasks which means production control is a critical control aspect of the manufacturing department; and several other miscellaneous remarks.

There seems to be agreement between top purchasing men and their top management as to the importance of purchasing; only 12% of the respondents indicated real conflict (Table 21). When asked to give their own view of the role-importance of purchasing, 98% indicated that the importance is growing as more firms recognize the potential of purchasing to reduce costs and consequently, increase profits. Table 22 indicates that practitioners expect more purchasing authority and responsibility (20%), better trained personnel (17%), a stronger management role for the buyer (15%), and generally, a more professional operation.

TABLE 20

PRACTITIONER SAMPLE

QUESTION: WILL PURCHASING EVOLVE INTO THE MATERIAL MANAGEMENT CONCEPT?

Number Answering: 60 of 75 (80.0%)

Answers	Number of Responses	Percent of 60
Yes	33	55
No	13	22
Maybe	8	13
Depends	5	8
Don't know	1	2
Total	60	100%

Source: Sample Data, 1968

Comments:

I. "Yes" respondents	Number of Responses	Percent of 25
Logical combination of similar functions for cohesion, coordination and control. Acts as a catalyst between inventory and production control, establishes accountability, helps cope with sudden change.	6	24
Doesn't need to include production control.	6	24
For assembly type industries where purchased parts and sub-assemblies is more important than the manufacturing.	2	8

TABLE 20 (Continued)

I. "Yes" respondents	Number of Responses	Percent of 25
But purchasing will still remain, it's just one of the functions	3	12
Okay for smaller companies--the material manager would be a "jack of all trades," can't do it in the large firm	2	8
Yes--depends on quality and availability of personnel	2	8
It will give a total management orientation	1	2
Computers bring systems for organization control and integration but purchasing will still remain	3	12
Yes but you can use committees--don't need to organize functions together	1	2
Purchasing is materials management	1	2
Yes if manual as computers will decentralize MRO items in the using department with data phones, etc.	1	2
Because the plant manager hasn't been coordinating inventory and production control, etc.	1	2
Because of Defense Department influence	1	2

Totals exceed 100% because of a few multiple answers.

II. "No" respondents	Number of Responses	Percent of 12
Only for the plants, purchasing is for the total company	1	8
In many operations (such as industrial machines), the manufacturing must control production scheduling.	1	8
A materials manager will either "lean" towards production control or purchasing--no objectivity	1	8
Purchasing is a specialized function and separate from production control	2	17
Not for chemicals, we have 20 year contracts for our critical raw materials	1	8
Might become unwieldy, lose control	1	8

TABLE 20 (Continued)

II. "No" respondents	Number of Responses	Percent of 12
Purchasing can cooperate and coordinate with inventory and production control without putting all the functions together	1	8
We've gone to product purchasing managers to help production control, we use computers for commodities	1	8
Purchasing still must be done	1	8
In a few companies who have tried it, it hasn't worked as well as they had hoped	1	8
It's too massive, too much--amounts to the President's job	1	8
Totals	12	100%

III. "Maybe and depends" respondents (combined)	Number of Responses	Percent of 13
It doesn't have to control all materials functions such as production control	4	31
Yes in institutions, assembly industries and component assembly like aero space, not for industry where manufacturing is the key	4	31
Okay at plant level, but procurement is total corp. at the top level	1	8
You don't need to force coordination via organization--you don't have to control it	1	8
The EDP Group wants purchasing--they sell materials management to justify the move	1	8
Not in an integrated company where one division sells its product as a raw material to another division	1	8
To much responsibility--most companies won't delegate this much to one area	1	8
Total	13	100% *

*Rounded to 100%

TABLE 21

PRACTITIONER SAMPLE

QUESTION: IS YOUR TOP MANAGEMENT VIEW OF THE IMPORTANCE--ROLE OF PURCHASING--MATERIALS MANAGEMENT THE SAME AS YOURS?

Number Answering: 59 of 75 (78.6%)

Answers	Number of Responses	Percent of 59
Yes	42	71.1
No	7	11.8
Somewhat	5	8.4
Coming closer	5	8.4
Total	59	100.0% *

* Rounded to 100.0%

TABLE 22

PRACTITIONER SAMPLE

QUESTION: HOW WILL THE ROLE, SCOPE AND FUNCTION OF PURCHASING CHANGE IN THE NEXT 10 YEARS?

Number Answering: 54 of 59 (91.5%)

Change	Number of Responses	Percent of 54
More Authority and Expanding Responsibility	11	20.4
More Technically Trained Men	9	16.7
Role of Buyer Expanded--Stronger Management Role	8	14.8
Total Cost Concept and More Inventory Control	8	14.8
More Mechanized - Computers	5	9.2
Becoming More Professional and Sophisticated	5	9.2
More Research Within Department	1	1.9
Misc.	7	13.0
Total	54	100.0%

POSITION DESCRIPTIONS AND JOB DUTIES

All but one of the practitioners in the 61 firms and divisions had written job descriptions, organization charts and purchasing manuals. Many of the job descriptions (13) were in the process of being revised. However, 38 or 62% of the 61 were obtained for analysis. After examining the 38 sets of job descriptions which included 3 or 4 positions each, the most thorough and representative examples for the objective of this study were selected to be included as Appendix F. Only a few changes have been made to conceal the identity of the firms. Another graduate student also reviewed the job descriptions to help keep the bias possibility to a minimum. He was asked to select examples and then the two selections were compared and adjusted. The following is a brief summary of each position, from the highest to the lowest, with comments relevant to Appendix E the cognitive and affective classifications.

I. Staff Vice President, Materials. The incumbent is responsible for directing, organizing, controlling planning, and coordination of purchasing, packaging, material and inventory control and traffic. He develops and directs plans, budgets, and people. These duties obviously include all the levels of the cognitive classification: knowledge, comprehension, application, analysis, synthesis and evaluation. Quite obviously, this would be true of most executive positions. Certainly this individual must possess all of the affective skills so necessary for skillful leadership such as receiving, responding, valuing, organization, and the characterization of a value complex. In fact, coordination is a major part of his job and skill in the human relations areas and value concepts are essential to success in this position.

II. Regional Purchasing Manager. Again, this individual must possess all of the cognitive and affective powers. His activities are more technical but he is still primarily a manager, not a purchasing technician. The firm requires the incumbent to have either a college degree in business or engineering, plus 10 year purchasing experience including 3 years of supervisory activity.

III. Purchasing Agent. In this case, the individual reports to a Director of Purchasing and he has both managerial and technical duties. It is interesting to note that 3 abilities are emphasized: human relations, managerial know-how, and "intricate" problem solving ability. Again, all of the cognitive and affective powers are required.

IV. Manager of Purchasing Research. This position is included because it is a rather new type of purchasing position and few examples are available. He is a research specialist conducting depth studies on problems common to several intra-company purchasing departments and/or too time-consuming to be handled by the line purchasing organization. In this position, the cognitive powers would dominate with the emphasis on evaluation.

V. Senior Buyer (Highest Level). This is the key purchasing function in any purchasing operation. The senior buyer is the highly skilled technician who primarily buys complicated non-routine materials and equipment. The routine buyers are at the entry and junior levels. All the cognitive and affective powers are necessary at the senior level. The junior levels probably require knowledge, application and analysis cognitive traits, but not the synthesis and evaluation traits until he has enough skill to advance to the senior level. The external contact, internal department coordination requirements, and ethical demands require a high degree of positive affective powers for all purchasing personnel.

It is interesting to note the high education requirements for the senior buyer position, a degree in business or engineering and a graduate degree is preferred. He is a business analyst and must know all the managerial dimensions of resource allocation. In a sense, he manages commodities for his own firm and the vendor.

VI. Project Expediter. This job can be (as it is for the firm used as an example) a very exacting position, requiring a great deal of timing sense, human relations ability (you have to press people with a minimum of annoyance) and perceptive abilities to identify existing or potential problems. Thus, this position must include all of the cognitive and affective powers.

Also included in Appendix XIV is a rating scale of important purchasing personnel traits related to job functions. This list is comprehensive and is applicable to all purchasing positions except clerical. It is included because it is really a summary application of the cognitive and affective classification in the Appendix. Such a list could be used for a curriculum guide even if no other curriculum plans or outlines were available. While it comes from one particular firm, its application is thought to be universal and it is the most complete list obtained during the field and secondary research.

Purchasing Methods, Procedures, Techniques

Table 23 (practitioner) and Table 24 (educator) represent a comparison of how the two different respondents rate the importance of various purchasing methods and techniques. The list was developed from publications and the exploratory (test) research phase of this study. Using a + or - 3 percentage point spread (for up to 3-way ties), practitioners are in agreement on 15 items and apart on 29; table 23 has the comparative rankings.

The greatest disparity (spread of 10 or more percentage points) between practitioners and educators is in the following areas:

1. OR-Operations Research and math decision theory--the educators rate it 4th, the practitioners 36th.

2. Problem-solving techniques--here the practitioners rate it 13, educators 32.

3. Marketing--the educators rate it 17, practitioners 34.

4. Legal aspects--the practitioners rate it 11th, educators 26th.

5. Special government (DOD) procurement--practitioners rate it 42nd out of 45, the educators 28th.

6. Systems contracting--practitioners rate it 23rd, the educators 11th.

7. Reporting methods--practitioners rate it 24th, educators 33rd.

8. Accounting--practitioners rate it 31, educators 42.

9. Negotiation--practitioners rate it 2nd, educators 12th.

Perhaps this disparity merely represents a difference in need, interest or full meanings of the methods, etc. In all cases, the educators select a procedure by lower total point values. For instance, the 3rd highest procedure in the practitioner

TABLE 23

PRACTITIONER SAMPLE

QUESTION: WHAT PURCHASING--MATERIAL MANAGEMENT TECHNIQUES, TOOLS, METHODS AND PROCEDURES DO YOU CONSIDER TO BE IMPORTANT TOPICS AND SUBJECTS FOR PURCHASING EDUCATION?

Number Answering: 65 of 75 (87%)

			PRACTITIONER	
Practitioner Rank Order	Tools, Techniques	Educator* Rank Order	Number of Responses	Percent of 65
1	Electronic Data Processing	1	54	83
2	Negotiation	12	51	78
3	Value Analysis-Engineering	2	44	68
4	Communications	8	43	66
5	General Management Skills	12	43	66
6	Price-Cost Analysis	9	42	65
7	Human Relations	10	36	55
8	Planning	14	36	55
9	Vendor Evaluation	13	36	55
10	Inventory Control	6	34	52
11	Legal Aspects	26	34	52
12	Forecasting	3	34	52
13	Problem Solving - General	32	32	49
14	Foreign Procurement	7	30	46
15	Purchasing Research	5	30	46
16	Internal Purchasing Evaluation	19	30	46
17	Make or Buy	16	29	45
18	Economic Order Points	22	26	40
19	Blanket Orders	27	26	40
20	Quality Contol	24	26	40
21	Sub Contracting	21	24	37
22	Financial Analysis	15	24	37
23	Systems Contracting	11	23	35
24	Reporting Methods	33	23	35
25	Learning Curve	31	22	34
26	New Product Procurement	23	22	34

TABLE 23 (Continued)

Practitioner Rank Order	Tools, Techniques	Educator* Rank Order	PRACTITIONER Number of Responses	PRACTITIONER Percent of 65
27	Organization	29	22	34
28	Pert-CPM	20	21	32
29	Return on Investment	30	20	31
30	Traffic	25	19	29
31	Accounting	42	19	29
32	Directing	34	18	28
33	Controlling	Omitted	17	26
34	Marketing	17	16	25
35	Personnel Management	36	16	25
36	OR--Math Decision Theory	4	15	23
37	General Math	39	15	23
38	Automation	42	15	23
39	Production Methods	43	15	23
40	Production Control	38	14	22
41	Trade Relations	40	13	20
42	Special Government (DOD)	28	13	20
43	Material Handling	35	12	18
44	R & D	37	11	17
45	Sales	41	6	9
	All of the Above	13	6	9

Totals Exceed 100.0%: Multiple Answers

* See Table 24 for complete Educator list

TABLE 24

EDUCATOR SAMPLE

QUESTION: WHAT PURCHASING-MATERIAL MANAGEMENT TECHNIQUES, TOOLS, MANAGEMENT METHODS WILL BECOME MORE IMPORTANT IN THE 1970's? PLEASE CHECK THOSE ITEMS THAT ARE THE MOST IMPORTANT AS ALL ITEMS ON THE LIST ARE IMPORTANT.

Number Answering - Mail Questionnaire: 64 of 65 (98%)

Number Answering - Personal Interview: 11 of 15 (73%)
Total: 75 of 80 (94%)

		MAIL		PERSONAL		TOTAL	
Rank Order	Techniques, Tools, Methods	Number of Responses	Percent of 64	Number of Responses	Percent of 11	Number of Responses	Percent of 75
1	Electronic Data Processing	48	75.0	8	72.7	56	74.6
2	Value analysis engineering	29	45.3	7	63.6	36	48.0
3	Forecasting	30	46.8	6	54.5	36	48.0
4	OR-Math decision theory	28	43.7	7	63.6	35	46.6
5	Purchasing research	26	40.6	6	54.5	32	42.6
6	Inventory control	26	40.6	5	45.4	31	41.3
7	Foreign procurement	25	39.0	4	36.3	29	38.6
8	Communications	24	37.5	5	45.4	29	38.6
9	Price cost analysis	21	32.8	7	63.6	28	37.3
10	Human relations	21	32.8	7	63.6	28	37.3
11	Systems contracting	22	34.3	5	45.4	27	36.0
12	General Management Skills	24	37.5	3	27.2	27	36.0
13	Negotiation	20	31.2	6	54.5	26	34.6
14	Vendor evaluation	19	29.6	5	45.4	24	32.0
15	Planning	18	28.1	6	54 5	24	32.0
16	Financial analysis	16	25.0	5	45.4	21	28.0
17	Make or buy	14	21.8	6	54.5	20	26.6
18	Marketing	18	28.1	2	18.1	20	26.6
19	Automation	16	25.0	3	27.2	19	25.3

TABLE 24 (Continued)

		MAIL		PERSONAL		TOTAL	
Rank Order	Techniques, Tools, Methods	Number of Responses	Percent of 64	Number of Responses	Percent of 11	Number of Responses	Percent of 75
20	Internal purchasing evaluation	14	21.8	4	36.3	18	24.0
21	PERT - CPM	15	23.4	3	27.2	18	24.0
22	Sub-contracting	12	18.7	4	36.3	16	21.3
23	Economic order points	11	17.1	3	27.2	14	18.6
24	New product procurement	10	15.6	4	36.3	14	18.6
25	Quality control	12	18.7	2	18.1	14	18.6
26	Traffic	10	15.6	3	27.2	13	17.3
27	Legal Aspects	11	17.1	2	18.1	13	17.3
28	Blanket orders	9	14.0	1	9.0	10	13.3
29	Special government (DOD)	9	14.0	3	27.2	12	16.0
30	Organization	8	12.5	4	36.3	12	16.0
31	ROI (Return on Investment)	8	12.5	4	36.3	12	16.0
32	Learning curve	8	12.5	4	36.3	12	16.0
33	Problem solving	10	15.6	1	9.0	11	14.6
34	Reporting methods	10	15.6	1	9.0	11	14.6
35	Directing	8	12.5	3	27.2	11	14.6
36	Material handling	9	14.0	1	9.0	10	13.3
37	Personnel management	8	12.5	2	18.1	10	13.3
38	R & D	6	9.3	1	9.0	7	9.3
39	Production control	2	3.1	3	27.2	5	6.6
40	General math	5	7.8	-	-	5	6.6
41	Trade relations	2	3.1	1	9.0	3	4.0
42	Sales	2	3.1	-	-	2	2.6
43	Accounting	-	-	2	18.1	2	2.6
44	Production methods	-	-	1	9.0	1	1.3
	All of above	3	4.6	3	27.2	13	17.3

Totals Exceed 100.0%: Multiple Answers

sample, value analysis-engineering, received a vote of 68% whereas this same procedure was 2nd highest in the educator sample, but with just 48% selecting it. In other words, the educators had less agreement than the practitioners. Only Electronic Data Processing (EDP) was 1st in both cases with 75% of the educators and 83% of the practitioners selecting this category.

EDUCATIONAL REQUIREMENTS

While the section concerning job descriptions listed specific educational requirements generally requiring a college degree, what did the entire practitioner sample have to say concerning education?

The practitioners had difficulty answering the question concerning advice they would give the young high school graduate who might ask about a purchasing career; in fact, 24% couldn't really reply (Table 25). Of those who did answer, 19% would advise both a B. A. and M. B. A. degree, 18% advised a B. A. in business, 14% suggested an undergraduate engineering degree and M. B. A. and 45% recommended an engineering or technical degree, either as the only degree or in combination with other graduate degrees. Only 8% failed to urge that the young person obtain a degree of some type.

TABLE 25

PRACTITIONER SAMPLE

QUESTION: IF A YOUNG H.S. GRADUATE APPROACHED YOU AND ASKED HOW HE SHOULD PREPARE FOR A PURCHASING/MATERIAL MANAGEMENT CAREER, WHAT WOULD YOU TELL HIM?

Number Answering: 57 of 75 (76%)

Preparation	Number of Responses	Percent of 57
Obtain business degree & master's in business	11	19.2
Obtain business degree	10	17.5
Obtain engineering degree & master's in business	8	14.0
Obtain engineering degree	6	10.5
Obtain combination of engineering and business degree	6	10.5
Obtain general technical degree	3	5.2
Obtain liberal arts degree	3	5.2
Obtain general degree & M.B.A.	3	5.2
Obtain engineering degree & law degree	2	3.5
No special training necessary	2	3.5
Obtain business degree & law degree	1	1.7
Other	2	3.5
Total	57	100.0% *

*Rounded to 100.0%

The preference for an engineering background is mixed, as indicated in a later question concerning the need for their own personnel to have engineering degrees. The data indicates that 39% do prefer the engineering degree in order to help coordinating functions with the engineering department and for specific buying assignments such as capital equipment. Those opposed seem to question the need for the in-depth technical knowledge for a business position. Typical comments were:

> YES. "He could be of more direct assistance in value engineering " "He could 'argue' with more authority (with the engineering department." "He has a 'better mind.'" "We need the technical orientation." "Yes - for capital equipment buying." "Yes, but a B.A. with mechanical aptitude is OK."
>
> NO. "Law is better, it teaches the analytical approach." "Knowledge of the product and product application is the important element, not detailed technical skill." "The average competent engineer is not a good businessmen, he may be inflexible, i.e. 2+2 must equal 4."
>
> DEPENDS. "Yes for capital equipment buying." "Depends - need balance, it would be an advantage to have at least one for technical problem." "Some electronic products might call for an engineer."

The educators were asked if technical firms need purchasing-materials personnel with engineering degrees and while only 25% replied "yes" (38% for the personal), 41% said "it depends." The following typical comments are quoted from the educators:

> YES. A good purchasing man must know two things, the art of purchasing and his own product, if the product is technical in nature, the purchasing employee should be a technically trained individual.
>
> NO. The administrative and commercial considerations are much greater in the material management function than the technical considerations, therefore, engineering knowledge is considered secondary.
>
> DEPENDS. Depends on the comprehensiveness of the operation and the number of technical specialization that must be met.

There seems to be some inconsistency in the perference for college degrees and actual hiring qualifications. Table 26 shows that 48% of the 46 who replied do not require a 4-year college degree; 17% will accept experience and high motivation and 2 will accept junior college degrees. It is rather surprising to find that only 36% have their hiring requirements in writing. However, 53% indicate their hiring qualifications will change in the 1970's with more college degrees and technical backgrounds being mandatory for entry.

It was discouraging to find that practitioners were unable to assess specific educational requirements for each of their purchasing positions (Question 7, p. 6 of the questionnaire), except to state general college degree and experience requirements which would apply to any or all of the positions

The data indicates the simple majority will hire some personnel who have no management desires or ability This is a realistic view as their comments point out that the "management potential requirement depends on the present number of potential candidates and you can't have too much competition for management positions (conflict, morale problems). On the other hand, those who do hire only management potential (31%) point out that normal attrition and selection errors require many candidates for the one or two who actually develop.

When asked if there was anything unique about the management aspect of the purchasing management positions, 69% replied "no" as the management skills are universal and personality-human relations skills can be key prerequisites (Table 27) The "yes" replies (27%) emphasize that the personality skills, negotiation experience, and purchasing knowledge are unique management abilities.

TABLE 26

PRACTITIONER SAMPLE

QUESTION: WHAT ARE YOUR DEPARTMENT ENTRY HIRING QUALIFICATIONS?
IN WRITING?

Number Answering: 46 of 58 (79%)

NOTE: 21% of 58 could not answer.

Hiring Qualifications	Number of Responses	Percent of 46
College degree-mandatory	13	28.2
College degree-preferred	9	19.5
College degree and experience	6	13.0
Professional degree (engineering, Law)	5	10.8
Personal drive, motivation	4	8.6
Junior college-minimum	2	4.3
Degree or experience	2	4.3
Just Experience	2	4.3
Other	3	6.5
Total	46	100.0%*

NOTE: 24 or 52% require 4 year college degree of some type.

Number Answering: 58 of 60 (97%)

In Writing?	Number of Responses	Percent of 58
No	22	37.9
Yes	21	36.2
Other**	15	25.8
Total	58	100.0%*

*Rounded to 100.0%

**Just job descriptions, no specific entry specifications, or the personnel department has the criteria.

TABLE 27

PRACTITIONER SAMPLE

QUESTION: ARE THERE ANY UNIQUE MANAGEMENT SKILLS AND KNOWLEDGE FOR PURCHASING MANAGEMENT?

Number Answering: 68 of 75 (91%)

Answers	Number of Responses	Percent of 68
No	47	69.1
Yes	18	26.5
No Decision	3	4.4
Total	68	100.0%

Number Answering: 12 of 18 (68%)

COMMENTS

I. "Yes" Answers	Number of Responses	Percent of 12
It requires a certain personality, "sales ability," human relations, negotiation skills are peculiar	5	41.7
Need experience with the function	3	25.0
To Sense when to make a decision	1	8.3
Without experience, he can overlook big areas or improperly delegate	1	8.3
It's a rare combination of bookkeeper, engineer and salesman	1	8.3
He must know the supplier's business, this is unique	1	8.3
Total	12	100.0%*

*Rounded to 100.0%

TABLE 27 (Continued)

II. "No" Answers	Number of Responses	Percent of 17
Management Skills are basic to all functions	5	29.4
Only certain personality traits and human relation skills are unique	4	23.5
Just so he knows costs	2	11.8
If he has communication ability	2	11.8
There are too many examples of success by the "outsider"	2	11.8
Just learn the "lingo" and a new environment	1	5.9
It isn't that much of a speciality	1	5.9
Total	17	100.0%*

*Rounded to 100.0%

The educators are fairly evenly divided on the "unique" issue with 44% replying yes and 48% no with a higher number, 7 or 54% no's, in the personal sample. The personal educator sample represents the large and more mature business schools. Table 28 contains the educator comments concerning uniqueness of the purchasing management positions and the "yes" respondents cite the communications and external relationships as unique while the "no" respondents stated the commonality of management skills.

One might expect rather precise, written purchasing management qualifications. However, Table 29 indicates that 43% of the 61 practitioners couldn't give anything specific or no statement existed. The remaining 57% gave very general comments such as college degree and experience and ability to do the job. Approximately 98% said the management qualification would change in the next 10 years with the college degree becoming mandatory.

COLLEGIATE (2 YRS, 4 YRS AND GRADUATE) CREDIT PURCHASING COURSES

Table 30 shows that 69% of the institutions in the educational sample teach purchasing at the undergraduate level, 18% at the graduate level and 11% at both for a total of 14, or 23%, offering graduate courses. Of the total 80 institutions, 60 or 75% teach a total of 88 purchasing courses and 68% of the 60 teach one course, 21% teach two courses (Table 31). Approximately 70% of the courses are offered once a year. The titles of the courses have slight variations but 57% are called purchasing, 6% procurement, 4% logistics, and 11% materials management or control. Marketing and principles of management are the most common prerequisites for the basic purchasing course, with 20 courses requiring marketing and 14 requiring management.

TABLE 28

EDUCATOR SAMPLE

QUESTION: IS THERE ANYTHING UNIQUE ABOUT PURCHASING MANAGEMENT, I. E. THE MANAGEMENT ASPECTS? (NOT THE TECHNICAL TASKS)

Number Answering - Mail Questionnaire: 23 of 65 (35%)

Number Answering - Personal Interview: 4 of 15 (27%)
Total: 27 of 80 (34%)

"Yes" Comments	MAIL		PERSONAL		TOTAL	
	Number of Responses	Percent of 23	Number of Responses	Percent of 4	Number of Responses	Percent of 27
Communication & Interrelations with other departments	9	39	--	--	9	33
External Relationships & Communication	5	22	1	25	6	22
Total Management Scope - Entire Firm	4	17	--	--	4	15
Importance of profit making decisions	3	13	--	--	3	11
Human Relations aspects	1	4	--	--	1	4
Rapid Tech. Changes have big impact	1	4	--	--	1	4
Difficult to measure performance	--	--	1	25	1	4
Negotiation is unique	--	--	2	50	2	7
Totals	23	100/0%*	4	100.0%	27	100.0%

*Rounded to 100.0%

NOTE: The "NO" Coments by 5 (4 mail, 1 personal) individuals restated the belief that management is common to all functions.

TABLE 29

PRACTITIONER SAMPLE

QUESTION: WHAT ARE YOUR PURCHASING MANAGEMENT QUALIFICATIONS (FOR YOUR FIRM)

Number Answering: 61 of 61 (100%)

Management Qualifications	Number of Responses	Percent of 61
Can't Answer	17	27.9
Degree and Experience	10	16.4
Nothing Specific	6	9.8
Ability to get the Job Done	5	8.2
Ability to Compete, Motivate, Communicate, Teach, etc.	5	8.2
Prefer Graduate Degree	4	6.6
Degree Not Necessary	3	4.9
"Good Businessman"	3	4.9
Experience	2	3.3
College Degree or Equivalent	2	3.3
Self Confidence	1	1.6
Not Applicable - no turn over problems	3	4.9
Totals	61	100.0%

TABLE 30

EDUCATOR SAMPLE

QUESTION: ON WHAT LEVELS ARE PURCHASING-MATERIAL MANAGEMENT ACADEMIC-CREDIT COURSES OFFERED?

Number Answering - Mail Questionnaire: 65 of 65 (100%)
Number Answering - Personal Interview: 15 of 15 (100%)

	MAIL		PERSONAL		TOTAL	
Levels	Number of Responses	Percent of 65	Number of Responses	Percent of 15	Number of Responses	Percent of 80
Undergraduage	46	70.7	9	60.0	55	68.7
Graduate	8	12.3	6	40.0	14	17.5
Both	7	10.7	2	13.3	9	11.2

Totals exceed 100.0%: Multiple answers.

The data indicate that 1 to 4% of the undergraduate business students at 19% of the institutions take at least one purchasing course, 5 to 9% at 26% of the institutions, and 10 to 14% at 21% of the institutions. At the 43 schools where graduate business students can take purchasing, 19 responded as follows: 10% of the institutions have from 20 to 30% of their students taking a purchasing course; 37% have 10 to 19% enrolled; 11% have 5 to 9% in purchasing classes and 42% have 1 or less percent taking purchasing. This question has a very low response rate (45%) and the figures should be used with caution.

TABLE 31

EDUCATOR SAMPLE

QUESTION: THE NUMBER OF CREDIT PURCHASING-MATERIALS MANAGEMENT COURSES OFFERED?

Number Answering - Mail Questionnaire: 46 of 47 (98%)

Number Answering - Personal Interview: 11 of 13 (85%)*

Total: 57 of 60 (95%)*

Number of Courses	MAIL		PERSONAL		TOTAL	
	Number of Responses	Percent of 46	Number of Responses	Percent of 11	Number of Responses	Percent of 57
One	33	72	6	55	39	68
Two	7	15	5	45	12	21
Three	3	7	--	--	3	5
Four	1	2	--	--	1	2
Five	1	2	--	--	1	2
Six	--	--	--	--	--	--
Seven	1	2	--	--	1	2
Total Institutions	46	100.0%	11	100.0%	57**	100.0%

* 60 institutions teach purchasing or 75% of the Total of 80; 47 in the Mail and 13 in the Personal sample. Of the 60, 55 or 92% teach it at the undergraduate level; 5 or 8% of 60 teach the graduate level only and 9 or 15% teach at both the under and graduate level for a total of 14 or 23% (14 institutions offer graduate purchasing). 16 or 20% of the 80 do not teach purchasing and 3 or 4% of the 80 teach adult non-credit courses.

** 57 institutions teach a total of 88 courses.

Typical purchasing class size seems to be 20 to 39 (Table 32). The two most popular textbooks are Purchasing and Materials Management by Lee and Dobler and Procurement: Principles and Cases by England. When asked to rate the top four purchasing textbooks, the respondents were consistent and rated Lee and Dobler first, England 2nd, Heinritz and Farrell third, and Westing and Fine fourth. Practitioners were not that familiar with the textbooks to accurately rate them.

TABLE 32

EDUCATOR SAMPLE

QUESTION: WHAT IS THE AVERAGE NUMBER OF STUDENTS PER CREDIT PURCHASING COURSE?

Numbering Answering - Mail Questionnaire:	46 of 47	(98%)
Numbering Answering - Personal Interview:	12 of 13	(92%)
Total:	58 of 60	(95%)

Average Number of Students Per Course	MAIL		PERSONAL		TOTAL	
	Number of Responses	Percent of 70 Courses	Number of Responses	Percent of 12 Courses	Number of Responses	Percent of 82 Courses**
Over 60	6	9	--	--	6	7
59 - 50	13	19	1	8	14	17
49 - 40	6	9	3	25	9	11
39 - 30	13	19	4	33	17	21
29 - 20	22	31	1	8	23	28
19 - 10	7	10	2	17	9	11
9 - 5	3	4	1	8	4	5
Total no. courses	70	100%*	12	100%	82	100%

* Rounded to 100.0%

** 82 courses or 93% of the total of 88 courses in the sample.

Recommended Number, Level and Type of Purchasing Courses

As expected, the data show that 94% of the practitioners thought there should be purchasing courses and 17 or 47% of 36 suggested two courses, 19% one, 8% three, and 25% four. Thus, the practitioners desire more courses per institution than the number offered by schools in the sample (68% offered just one course).

When asked how many purchasing-materials courses should be offered, the educators did suggest two courses. Sixty percent of the educators in the mail survey recommended undergraduate level courses including 27% who favored one course, 13% suggested two, and 12%, three. Only 13 or 22% of the 60 mail respondents suggest a graduate level course including 15% who favor one course; when the two levels are combined, 52% suggest one course, 17% two, and 15% four. For some reason, the number of suggested courses dropped during the division by level. For the educators in the personal sample, 50% recommend the undergraduate level including 29% who suggested one course, and 14% two. While only 29% suggested a graduate level only, 7 or 50% recommended purchasing courses (generally two courses) at both levels.

Eighty-five percent of the practitioners could not suggest the level (B.A. or M.B.A.) but this is probably a very honest response from laymen to a rather difficult educational question. Only 34 practitioners could suggest the type of course, probably for the same reasons; Basic Purchasing I and II or 2 courses was the most common response with 15 or 44% (Table 33).

TABLE 33

PRACTITIONER SAMPLE

SUGGESTED TYPES OF COLLEGE PURCHASING COURSES

Number Answering: 34 of 66 (52%)

Course Description	Number of Responses	Percent of 34
Basic purchasing I & II	15	44.1
Purchasing III & IV	7	20.5
Contract administration (gov't)	6	17.6
Materials management I & II	5	14.7
Production and inventory control	3	8.8
Engineering (science)	3	8.8
Financial statements	2	5.8
EDP	2	5.8
Public administration	1	2.9
Value Analysis	1	2.9
Other	5	14.7

Total exceeds 100.0%: Multiple Answer

The educators recommended one basic (78%) and one advanced purchasing course (40%) and 35% suggested a basic materials management course (Table 34).

The following comments from two educators are illuminating concerning the number and type of courses:

> "Purchasing techniques appear too detailed to interest most students. The most effective courses are with persons having been exposed to purchasing sufficiently to recognize what they yet have to learn, and particularly to comprehend relationships of purchasing to other functions of the firm. Intensive research and specialization may attract a few persons at the Ph.D. level."

> "The question should emphasize not quantity but quality, i.e., is purchasing perceived as a volatile interacting force or as a mechanistic being? This will provide how purchasing is perceived

TABLE 34

EDUCATOR SAMPLE

QUESTION: WHAT TYPE OF PURCHASING AND/OR MATERIALS MANAGEMENT COURSE SHOULD BE TAUGHT?

Number Answering - Mail Questionnaire: 42 of 65 (65%)
Number Answering - Personal Interview: 9 of 15 (60%)
Total: 51 of 80 (63.8%)

Title and Type of Course	MAIL		PERSONAL		TOTAL	
	Number of Responses	Percent of 42	Number of Responses	Percent of 9	Number of Responses	Percent of 51
Purchasing						
Basic	34	81	6	67	40	78
Advanced	21	50	4	44	25	49
Materials Mgt.						
Basic	14	33	4	44	18	35
Advanced	2	5	--	--	2	4
Traffic & Transportation	3	7	1	11	4	8
Logistics	3	7	--	--	3	6
Inventory Control	1	2	2	22	3	6
Government Procurement	2	5	1	11	3	6
Production Control	2	5	--	--	2	4
Value Analysis	2	5	--	--	2	4

Totals exceed 100%: Multiple Answers

by industry and how well students will be attracted to the profession. Mechanistic approach will tend to fractionalize the number of courses (like accounting) while the broader method will bring into focus inter-disciplinary approach and require fewer specialty but more in total."

Only the educators were asked about the trend for the total number of purchasing courses during the next ten years. Forty-eight percent said the total number (no. of institutions and courses per institution) will expand and 25% said they will contract. Table 35 gives the major reasons for expansion as increased demand from industry (33% of 30 responses), support from local and national N. A. P. M. (27%), and the need

TABLE 35

EDUCATOR SAMPLE

QUESTION: REASONS WHY COLLEGE PURCHASING - MATERIALS MANAGEMENT COURSES WILL EXPAND OR CONTRACT

Number Answering: Expand: (25) Mail Responses plus
(5) Personal Responses
Total: 30 or 38% of 80
Number Answering: Contract: (17) Mail Responses plus
(4) Personal Responses
Total: 21 or 26% of 80

Reasons Why Purchasing Courses Will Expand	Number of Responses	Percent of 30
Increased demand from industry recognition of profit potential	10	33
Depends on support by local and national N. A. P. M.	8	27
The field requires highly trained people and specialization. This will be recognized.	7	23
Purchasing has become more general management oriented.	3	10
As the number of colleges increase, some will want specialties	1	3
If the number of interested Ph. D. 's expand	1	3
Totals	30	100. 0%*

Reasons Why the Number of Purchasing Courses will Contract	Number of Responses	Percent of 21
Trend is against "How to" courses or specialization	9	43
Lack of interested and competent teachers	3	14
The growth is not in purchasing but it is in related areas of EDP, Inventory control and other quantitative courses	2	10
Insufficient industry demand	2	10
Not enough support from practitioners	1	5
Insufficient subject matter	1	5
Other areas are more inviting (Marketing, finance)	1	5
Only expansion will be at the Junior College level	1	5
The trend toward graduate business schools and generalization	1	5
Totals	21	100. 0%*

* Rounded to 100. 0%

for specialization (23%). Of those who felt the number will contract, 9 of 21 responses or 43% mentioned the trend against specialization and 14% suggested the teacher shortage will work against expansion.

Cross tabulations indicate that AACSB members are more pessimistic, only 31% said courses will expand and 28% said they will contract. Educators in junior colleges were more optimistic; only one of 7 said the courses will contract and 4 felt there would be expansion. Private institutions were slightly less optimistic with 35% indicating expansion and 19% contraction, but 26% either had no opinion or "didn't know."

Purchasing Majors and Degrees

Only 5.3 of the institutions in the sample offer an undergraduate major and just one has a major at the graduate level. The term major may be confusing to laymen but a generally accepted definition is "a field of concentration involving a formal grouping of related courses recognized and structured as a specialized field of study officially listed in an institution's catalog and on the student transcript." There are informal or unofficial majors where a student can tailor his own program through electives so long as he completes the official program of required majors and minors.

The great majority of educators (72%) do not recommend an undergraduate major primarily because: this approach is too narrow, there is insufficient demand from students, and many of the course topics are covered in other courses (Table 36). The practitioners are also opposed to the B.A. major by about the same vote, 64% and for about the same reasons. Cross tabulations point out that AACSB and private institutions show about the same vote against the B.A. major, 65% and 71%, respectively. However, 50% of the junior colleges voted for the major as one might expect.

Concerning a major at the graduate or M.B.A. level, the majority of educators (66%) also rule against the major for the same reasons: too narrow, topics covered in other courses, insufficient demand and limited subject content. The practitioners agree with the educators in that 67% said "no" to the M.B.A. major in purchasing primarily because such a program is too narrow. The practitioners in favor of an M.B.A. major (29%) generally feel that the graduate student should specialize and that a major will strengthen the management aspect of purchasing. The cross tabulations point out that 74% of the AACSB institutions and 65% of the private institutions in the sample are also against the M.B.A. major. Even the junior college institutions do not favor the graduate major as only one said "yes."

The educators also feel it was desirable to have the undergraduate purchasing course as an elective (61%), but not as a required core course (68% said no). For the graduate program, 58% favored a purchasing elective but 69% said not as part of the core. The cross-tabulations indicate little differences in the opinions of private vs. state institutions concerning "required" status, but the junior colleges are more in favor of purchasing as part of the required core; 67% yes for B.A., 50% yes for M.B.A.

Professor Pierce Davis, chairman of the Illinois Institute of Technology (IIT-Chicago) Department of Business and Economics reports that the IIT undergraduate major in purchasing is "just about dead" because of lack of student interest. The IIT program was promoted by the Chicago N.A.P.M. Association, but Professor Pierce Davis reports great difficulty in finding students even interested in the two Chicago N.A.P.M. scholarships of $2,000. While Davis favors a purchasing major

TABLE 36

EDUCATOR SAMPLE

QUESTION: SHOULD THERE BE A PURCHASING OR MATERIAL MANAGEMENT MAJOR ON THE BA LEVEL?

Number Answering - Mail Questionnaire: 65 of 65 (100.0%)
Number Answering - Personal Interview: 14 of 15 (93.3%)
Total: 79 of 80 (98.7%)

	MAIL		PERSONAL		TOTAL	
Answers	Number of Responses	Percent of 65	Number of Responses	Percent of 14	Number of Responses	Percent of 79
Yes	15	23.0	2	14.2	17	21.5
No	45	69.2	12	85.7	57	72.1
No Opinion	4	6.1	--	----	4	5.0
Depends	1	1.5	--	----	1	1.2
Total	65	100.0%*	14	100.0%*	79	100.0%*

WHY?

Number Answering - Mail Questionnaire: 65 of 65 (100.0%)**
Number Answering - Personal Interview: 12 of 15 (80.0%)***

	MAIL		PERSONAL		TOTAL	
Why?	Number of Responses	Percent of 65**	Number of Responses	Percent of 12***	Number of Responses	Percent of 77
No, too narrow	31	47.6	8	66.6	39	50.6
Not enough demand by students	15	23.0	1	8.3	16	20.7
Topics covered in other courses	14	21.5	--	----	14	18.1
Insufficient subject material	9	13.8	2	16.6	11	14.2
Not enough demand by industry	11	16.9	--	----	11	14.2
Yes, it is a separate field like marketing etc.	8	12.3	--	----	8	10.3
Can't get it approved	5	7.6	--	----	5	6.4
Yes, Need a specialized application	5	7.6	--	----	5	6.4
Depends on how you d define purchasingq	4	6.1	--	----	4	5.1
Too Vocational	1	1.5	1	8.3	2	2.5

Total exceeds 100.0%: Multiple Answers

* Rounded to 100.0%

** Mail survey includes the total number answering

*** Personal interview includes only those offering comments.

at the graduate level (not the undergraduate level), he has had only one graduate purchasing student in the last 2 or 3 years.[2]

It is doubtful whether the practitioners understand the difficulty and rather complex procedure used to initiate new college credit courses. It should be noted that the department, the full faculty, and a divisional committee of the entire university have to vote on this one course at many schools.

Purchasing Course Topics

After analyzing 14 course outlines from 14 different institutions, the topics generally followed the chapter headings of the adopted books. Advanced courses in purchasing concentrate on cases. There is some question as to whether an advanced text in purchasing exists. A collection of techniques books such as Systems Contracting by Bolton could be devised for advanced courses. Perhaps this is the reason why most of the institutions teach just one course and rarely over two. Caution--other courses like inventory control and production control are usually part of the general management or production major; purchasing students may and do take these subjects, but they cannot be called purchasing courses.

Philosophy of the Business School

A large percentage (43%) of the educators state that their institution's undergraduate business curriculum philosophy is a broad general management approach, with 59% listing this same philosophy for the graduate business program. The great majority (75%) agree with the philosophy of their institutions, and 46% believe this philosophy is typical of leading business schools with another 22% in the "somewhat" category.

Junior Colleges and Vocational Schools

The educators believe that junior colleges and post-secondary vocational schools can provide purchasing education; 40% said "some" and 36% said "significant". Their reasons include: for basic introduction courses (16%), ok for non-management positions (18%), good for larger cities and for those who can't get a 4-year degree (14%), and a few others; see Table 37.

The practitioners were not very knowledgeable concerning junior colleges and only 71% attempted an answer, including 17% who really couldn't make up their minds (Table 38); 38% said they had an unfavorable attitude while 34% were positive. If one examines the 23 comments, it is obvious that the practitioner respondents prefer the 4-year degree. However, 72% of the 61 respondents indicated they would hire the junior college graduate with an AA or Associate of Arts degree. In a summary type question, 52% of 48 practitioners said they preferred a combination general and specialized business education. Practitioners admittedly know very little about post-secondary vocational-technical schools.

The N. A. P. M. Curriculum

The N. A. P. M. curriculum is intended for use in academic institutions and by practitioners who want to earn the N. A. P. M. Professional Certificate. Table 39

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[2] Telephone interview with Professor Pierce Davis, May 7, 1969.

TABLE 37

EDUCATOR SAMPLE

QUESTION: WHAT ROLE COULD VOCATIONAL AND JUNIOR COLLEGES PLAY IN PURCHASING EDUCATION?

Number Answering: Mail Questionnaire: 40 of 65 (62%)

Number Answering: Personal Interview: 15 of 15 (100%)
Total: 55 of 80 (68.8%)

	MAIL		PERSONAL		TOTAL	
Comments	Number of Responses	Percent of 40	Number of Responses	Percent of 15	Number of Responses	Percent of 55
OK for basic introductory courses	8	20	1	7	9	16
Good for clerks, buyer, technical skills, not for management	5	13	5	33	10	18
None - the purchasing mgr. needs a 4 year degree	4	10	1	7	5	9
Yes, in larger cities for local needs	4	10	--	--	4	7
Offer an AA degree for those who can't go on	4	10	--	--	4	7
Not a good professional image	3	8	1	7	4	7
No, only the 4 year college at the Jr.-Sr. level can do it	3	8	--	--	3	5
Yes, non-terminal degree used like N.A.P.M. list	3	8	--	--	3	5
Yes, non-credit courses	2	5	--	--	2	4
Good for middle management	1	3	--	--	1	2
For "core" business courses	1	3	--	--	1	2
Have the purchasing major, as the 4 year college will not	--	--	1	7	1	2
Miscellaneous	2	5	6	40	8	15
Totals	40	100.0%**	15	100.0%**	55	100.0%**

** Rounded to 100.0%

TABLE 38

PRACTITIONER SAMPLE

QUESTION: HOW DO YOU VIEW VOCATIONAL SCHOOLS (POST-H.S., NOT ASSOCIATE DEGREE) AS A PERSONNEL SOURCE--IF THEY HAD A PURCHASING PROGRAM?

Number Answering: 53 of 75 (70.6%)

Opinion	Number of Responses	Percent of 53
Unfavorable	20	37.7
Favorable	18	33.9
Don't know	7	13.2
Depends on the particular student	4	7.5
Bad image	2	3.7
Other	2	3.7
Total	53	100.0%*

Number Answering: 23 of 53 (43%)

Comments	Number of Responses	Percent of 23
Prefer 4 yr. degree	6	26.0
Never would make corp. staff	4	26.0
Large corp. can use them for routine work	4	17.3
Will hire and depends on position	3	13.4
Other	3	13.4
No objection--we hire them now	2	8.6
2 yr. degree not same as 1st 2 yrs. of 4 yr. college	2	8.6
Must be good technical school	2	8.6
No--4 yr. degree if all else is equal	2	8.6
Not actively recruited--just females	1	4.3

Total exceeds 100.0%: Multiple answers

*Rounded to 100.0%

shows that 60% of the practitioners agree with it including the six 3-hour purchasing-materials management courses. At first glance this may seem inconsistent with the earlier recommendations or merely a loyalty bias. However, the comments indicate they perceive it as a program for the person now in purchasing and not as a college credit curriculum. The comments also demonstrate a rather cursory knowledge of the program and respondents had great difficulty answering questions pertinent to it.

The educators show about the same preference for the N. A. P. M. curriculum as 66% had a favorable opinion but 18% feel it is too specialized (Table 40). In their comments, 16% of 37 educators specifically mention "too many courses," 14% said "too narrow" and 16% feel more behavioral and quantitative courses are needed.

COMPANY IN-SERVICE TRAINING (WITHIN THE FIRM)

Only 16 or 28% of the firms had their purchasing training programs in writing. However, 95% did conduct training activities including tuition payment for night college courses, 64%; N. A. P. M. meetings 62%; external adult programs such as the American Management Association and University Seminars 60%; and in-plant formal courses 45%. While most--at least 95%--of the practitioners recognize the importance of company purchasing training, the researcher found only 6 or 8 well-planned and documented training guides and policies. Only one or two contained specific curriculum recommendations for identified purchasing positions and none forecasted specific adult programs such as university seminars for specific individuals. In other words, aside from in-plant courses and staff meetings, just who should go to what "off firm" seminars was left largely to the individual's discretion and/or by supervisor decision a few weeks before the program which could be too late.

ADULT EDUCATION (OUTSIDE THE FIRM)

Insufficient and rather vague replies from practitioners prevent any assessment of the quality of various purchasing education programs (external to the firm--questions 20 and 21, practitioner questionnaire). In fact, only 45% could even suggest topics; even these topics are not in sufficient detail for planning purposes. As Table 41 indicates, only "general management like the Harvard Program" had any kind of frequency (24%) and one would expect this type of answer from an executive group.

Fifty-nine percent of the practitioners prefer universities to conduct adult education programs followed by 20% favoring the National N. A. P. M. and 13% the local N. A. P. M.; only 11% favor the American Management Association (A. M. A.).

An insufficient number of educators rated the A. M. A. program as few of them attend (question 20, of the educator questionnaire).

Only 42% of the institutions conduct adult purchasing programs (Table 42). The major reasons for the 43 or 58% who do not offer adult programs are: not enough local business interest (44%), lack of faulty interest 26%, and not enough faculty 28%. Almost half, 49%, expect their adult programs to expand as 88% of the educators have a favorable opinion of adult education programs. The educators, like the practitioners, could not offer very precise suggestions as to topics which can be taught at the adult level (question 16 of the educator questionnaire); many replied "all" or "any." It also appeared difficult for the educators to describe the kind of attendee who would receive the most benefit from adult programs aside from "manager level," the "motivated" and the person with a college degree (Table 43). Perhaps the following quote from one of the educators is the correct answer:

TABLE 39

PRACTITIONER SAMPLE

QUESTION: DO YOU AGREE WITH THE N. A. P. M. PROFESSIONAL EDUCATIONAL STANDARDS CURRICULUM?

Number Answering: 58 of 75 (77.3%)

Answers	Number of Responses	Percent of 58
Yes	35	60.3
Not entirely	11	18.9
No	6	10.3
Other	11	18.9

Total exceeds 100.0%: Multiple Answers

Number Answering: 32 of 58 (55%)

Suggestions	Number of Responses	Percent of 32
Need communication skills; it will rush educational activity	5	15.6
Needs improvement; it's a start	4	12.5
Not for certification or BA level	4	12.5
Too many purchasing courses and to much detail	3	9.3
Not sold on specialization and/or this program	2	6.3
Don't force it into colleges or on their students	2	6.3
Good for non-four year man to upgrade him	2	6.3
Not sure how effectively it can work	1	3.1
It will be of interest to young people with education	1	3.1
Need good curriculum and good education	1	3.1
Other	7	21.8
Total	32	100.0%*

*Rounded to 100.0%

TABLE 40

EDUCATOR SAMPLE

QUESTION: WHAT IS YOUR OPINION OF THE NAPM CURRICULUM? SEE THE NAPM PROFESSIONAL EDUCATIONAL STANDARDS PROGRAM.

Number Answering - Mail Questionnaire: 61 of 65 (93.8%)

Number Answering - Personal Interview: 13 of 15 (86.6%)
Total: 74 of 80 (92.5%)

	MAIL		PERSONAL		TOTAL	
Answers	Number of Responses	Percent of 61	Number of Responses	Percent of 13	Number of Responses	Percent of 74
Favorable	42	68.8	7	53.8	49	66.2
Have doubts	10	16.3	2	15.3	12	16.2
Topics covered in other courses	1	1.6	1	7.6	2	2.7
Insufficient subject matter	4	6.5	--	----	4	5.4
Unfavorable	2	3.2	1	7.6	3	4.3
Too specialized	8	13.1	5	38.4	13	17.6
Don't know about the program	1	1.6	--	----	1	1.4
Other	--	----	1	7.6	1	1.4

Totals exceed 100.0%: Multiple Answers

TABLE 41

PRACTITIONER SAMPLE

QUESTION: WHAT TYPE OF KNOWLEDGE AND SKILLS (TOPICS, SUBJECTS, ETC.) SHOULD BE OFFERED IN ADULT SEMINARS, ETC. (AMA, MSU, HARVARD, UWMI, ETC.)

Number Answering: 34 of 75 (45.3%)

NOTE: 41 or 54.7% could not answer this question, i.e., "They were not sure."

Subjects	Number of Responses	Percent of 34
General management like Harvard program	8	23.5
Negotiation and legal aspects	5	14.7
Economics of buying and selling	3	8.8
Math and EDP	3	8.8
Vendor analysis and ethics	2	5.8
Case Studies	2	5.8
Offer communications skills	1	2.9
Systems and procedures	1	2.9
N.A.P.M. decision-making, need more of it	1	2.9
Analysis of cost accounting	1	2.9
Human behavior	1	2.9
Other (not specific--just general comments)	6	17.6
Total	34	100.0%*

*Rounded to 100.0%

TABLE 42

EDUCATOR SAMPLE

QUESTION: IS ANY ADULT PURCHASING EDUCATION OFFERED BY YOUR INSTITUINSTITUTION?

Number Answering - Mail Questionnaire: 62 of 65 (95.3%)

Number Answering - Personal Interview: 12 of 15 (80.0%)

Total: 74 of 80 (92.5%)

	MAIL		PERSONAL		TOTAL	
Answers	Number of Responses	Percent of 62	Number of Responses	Percent of 12	Number of Responses	Percent of 74
Yes	22	35.4	9	75.0	31	41.8
No	40	64.5	3	25.0	43	58.1
Total	62	100.0%	12	100.0%*	74	100.0%*

*Rounded to 100.0%

> "The problem of adult education does not fit the question. It's a type of person who has found the value of more specific knowledge and is willing to put time and effort into it. Most of our people have a definite purpose of wanting to improve themselves on the job or to prepare for a better job."

The educators rated the most active institutions in purchasing education largely on the basis of their faculty and adult programs; Michigan State was first with 19 votes out of 37 (41%), University of Wisconsin 2nd with 37%, Harvard 3rd with 33%, and Arizona State 4th with 24%.

Certification

The practitioners voted 72% to 28% against a purchasing certification program largely because such a program would be too restrictive, no real purpose, i.e., purchasing is not a profession, and the field is too diverse (Table 44). Those in favor (28%) claim the program would serve as an incentive to engage in education, it adds a professional status to purchasing, and it "ranks" people.

The educators voted 55% to 41% in favor of certification for a wide variety of reasons pro and con (Table 45). However, educators in favor of the program generally see the advantage as a stimulus for people to continue their education and to establish goals. At least 7 said yes "but not now--we are not ready," and 6 feel it is important as a status symbol. The educators opposed to certification point out the differences between private and public vocations and the fact that industry is more interested in results.

N.A.P.M. EDUCATIONAL MATERIALS AND PROGRAMS

Local Associations

The practitioners feel the local N.A.P.M. Associations should help universities sponsor programs (55%), and conduct a wide variety of one-day, pre-meeting, and evening class programs (Table 46); this is nothing really new, the large locals are already engaged in these programs.

The educators generally agree with the practitioners, 47% voted for one-day workshops, 44% for night courses (one night a week for so many weeks type of program), and 35% want multiple day workshops as well as the normal dinner meetings. Table 47 gives detailed comments and suggestions for local N.A.P.M. programs. One important comment states that the type program depends on the characteristics of the particular group; another key comment is that planning by competent teachers is essential.

The National Association

The majority (52%) of the practitioners want the National N.A.P.M. to organize regional workshops and seminars. Others want more technical manuals (26%), and visuals, films, cases (26%).

The educators also look to the National for the traveling regional seminars as 51% favor this activity, 46% want more publicity, 48% want more manuals, and 41% more films. One educator comment is particularly interesting:

TABLE 43

EDUCATOR SAMPLE

QUESTION: WHAT TYPE OF PERSON DERIVES THE MOST BENEFIT FROM ADULT EDUCATION?

Number Answering - Mail Questionnaire:	59 of 65	(90.7%)
Number Answering - Personal Interview:	12 of 15	(80.0%)
Total:	71 of 80	(88.7%)

	MAIL		PERSONAL		TOTAL	
Answers	Number of Responses	Percent of 59	Number of Responses	Percent of 12	Number of Responses	Percent of 71
Manager level	20	33.8	1	8.3	21	29.5
Person with college degree	10	16.9	1	8.3	11	15.4
Having problems	10	16.9	2	16.6	12	16.9
Certain age level	12	20.3	--	----	12*	16.9
Past success	5	8.4	--	----	5	7.0
Other	23	38.9	9	75.0	32**	45.0
Don't know	15	25.4	--	----	15	21.1

Totals exceed 100.0%: Multiple Answers

* No measure of central tendency was possible.

** Breakdown of Other: relatively young with no degree 5, the motivated 18, any 3, and miscl. such as "alert mind," one who recognized his own needs, college degree man at the junior executive level, etc.

> "I don't know for sure, but feel that subordinates or junior level men are not really helped by the N. A. P. M. educational activities. P. A. 's are taken care of and pass on what comes to them by virtue of rank. Try to reach these junior men on their way up."

N. A. P. M. Educational Materials

The N. A. P. M. Guide to Purchasing was rated quite high by the educators; 27% rated it excellent, 36% very good and 22% good. What is surprising is that 9% were not aware of it.

TABLE 44

PRACTITIONER SAMPLE

QUESTION: ARE YOU IN FAVOR OF CERTIFICATION?

Number Answering: 67 of 75 (89%)

Answers	Number of Responses	Percent of 67
No	48	72
Yes	19	28
Total	67	100.0

Why	Number of Responses	Percent (Base Varies)
Yes - Serves as an Incentive to Education	10	53% of 19
No - Doesn't See Any Purpose	8	17% of 48
No - Doesn't Assume Productivity	2	4% of 48
No - Winners Might Think "They Have It Made"	1	2% of 48
Other	28	---------

Total Exceeds 100%: Multiple Answers

"Other Reasons"	Number of Responses	Percent (Base Varies)
Yes - Incentive to Education and adds to Professional Status	11	58% of 19
No - Too Restrictive and Purchasing is Not A Profession (Too Specialized)	8	17% of 48
No - Too Many Diverse Areas - Purchasing Not Ready For It	3	6% of 48
Yes - It "Ranks" People (If It Has Grandfather Clause)	2	10% of 19
Yes - Certification Sets Up A Depth Program	2	10% of 19
No - Can't Make Ethics and Experience Equal	2	4% of 48
Yes - In Lieu of Degree	1	5% of 19
No - One Can't Certify Another As "Good" etc.	1	2% of 48
No - It would discriminate Against Engineers	1	2% of 48
Other	5	---------

Total exceeds 100%: Multiple Answers

TABLE 45

EDUCATOR SAMPLE

QUESTION: ARE YOU IN FAVOR OF CERTIFICATION FOR PURCHASING, I. E. A CPA OR CPCU TYPE PROGRAM? COMMENTS

Positive Comments

Number Answering: 24 Mail plus 5 Personal
Total: 29 or 36% of 80

NOTE: At the end of each comment, only the number of respondents above one are given with a percent of the Total, 29.

1. Yes, but not now. It will take time. The field is not sufficiently developed. 7 (24%)
2. Adds to professionalism (like other certified programs, status, etc.). 6 (21%)
3. It would signify an individual has some degree of required knowledge. 3 (10%)
4. Urgently needed for upgrading. This will shake out the unqualified. 2 (7%)
5. Greatest and most effective stimulant to higher or additional education available. 2 (7%)
6. Chief value is the help it gives the individual. Highly uncertain as to whether it would improve value of employer. 2 (7%)
7. It gives a man a goal. Men work better towards goals.
8. If professionally done, it will be true achievement.
9. Purchasing is emerging as a profession similar to other certified programs.
10. Better to raise the status of purchasing in collegiate schools of Business.
11. Providing it is a guide and not a requirement for promotion.
12. Yes, but not compulsory for NAPM membership.
13. Yes, like England.

TABLE 45 (Continued)

EDUCATOR SAMPLE

QUESTION: ARE YOU IN FAVOR OF CERTIFICATION FOR PURCHASING, I. E. A CPA OR CPCU TYPE PROGRAM? COMMENTS

Negative Comments

Number Answering: 13 Mail plus 5 Personal
Total: 18 or 23% of 80

NOTE: At the end of each comment, only the number of respondents above one are given with a percent of the Total 18.

1. Not as necessary as CPA or CPCU because the purchasing manager does not usually set up a public "common career" practice. 4 (22%)
2. Why is it needed? Other functional areas aren't. Some purchasing men are seeking self-aggrandizement. 2 (11%)
3. No, we are members of a broader family of management. 2 (11%)
4. Better handled by individual companies to fit specific needs. 2 (11%)
5. Too difficult to set criteria which are fair to all competitive purchasers.
6. For public, not private purchasing.
7. Doubt if enforceable.
8. Not a solution to NAPM's professional problems.
9. Not unless certification can be analogous to constraints placed on a physician or lawyer.
10. Difficult to implement without "grandfather clause."
11. Detriment to full development of regular college programs in purchasing.
12. Must get industry support first.
13. No, the company is interested in results, not certificates.

TABLE 46

PRACTITIONER SAMPLE

QUESTION: WHAT TYPE OF EDUCATIONAL ACTIVITIES SHOULD LOCAL N. A. P. M. ASSOCIATIONS ENGAGE IN?

Number Answering: 55 of 75 (73.3%)

Answers	Number of Responses	Percent of 55
Help Local Universities sponsor Programs	30	54.5
One Day	17	30.9
Multiple Day Programs	14	25.4
Post Dinner Meetings	7	12.7
Lunch Meetings - Guest speakers	1	1.8
Don't Know	1	1.8
Other *	22	40.0

Totals Exceed 100.0%: Multiple Answers

Other *	Number of Responses	Percent of 22
2-3 Hour Workshop Sessions	4	18.2
Main Effort Should Come From District Area	4	18.2
Evening Classes	4	18.2
Pre-Dinner Meetings	3	13.6
Locals Are Incapable of Solving Problems (Depends on Size of Local)	3	13.6
Adopt a National Educational Program (Traveling Workshop)	3	13.6
Make Use of Academic Members	2	9.1
AMA and Local Programs are Too General	1	4.5
Provide Educational Activities For All Levels of Membership	1	4.5
Bring In Specialist That Corporations Can't Get	1	4.5
Misc.	7	32.0

Totals Exceed 100.0%: Multiple Answers

TABLE 47

EDUCATOR SAMPLE

QUESTION: WHAT KIND OF EDUCATIONAL ACTIVITIES CAN THE LOCAL NAPM ASSOCIATIONS PROVIDE? COMMENTS

Number Answering: 18 Mail plus 10 Personal
Total: 28 or 35% of 80

NOTE: At the end of each comment, only the number of respondents above one are given with a percent of the Total, 28.

Comments

1. Depends on the group and type of members. 4 (14%)
2. Need professional university teachers and must pay them. 3 (11%)
3. Night courses by university workshops. 2 (7%)
4. Design programs to meet needs of local memberships. 2 (7%)
5. Must be properly planned. 2 (7%)
6. Not much done in less than a day. Time is essential.
7. Predinner tried with limited success. Careful planning essential.
8. Night non-credit courses in specialized areas of purchasing for about 6 to 8 weeks.
9. Mostly lunch or dinner meetings now, but night courses or workshops would be valuable.
10. Also courses sponsored through NAPM in conjunction with colleges accredited by AACSB.
11. Little interest in predinner workshops. Little time to talk and ask questions. Evening sessions are best.
12. Chief advantage in regular meetings is the contacts made.
13. a. workshops - several days for advanced purchasing personnel
    b. night courses - potential or new purchasing personnel
    c. dinner meetings - for PA's and high subordinates

m

The practitioners were not particularly aware of N. A. P. M. materials; only 57% offered comments: of the 57%, all thought the Guide to Purchasing was valuable, 56% found the movies beneficial and 23% thought the case kits were useful.

The educator's question concerning the N. A. P. M. materials was not really constructed properly, but the totals are revealing. Table 48 indicates 36% were not familiar enough to rate any of the materials and the highest rating is "good" for all categories. Apparently, N. A. P. M. needs to improve their liaison with the educators.

TABLE 48

EDUCATOR SAMPLE

QUESTION: WHAT IS YOUR OPINION OF THE N. A. P. M. FILMS, BOOKS, AND CASE KITS, ETC. ?

Number Answering - Mail Questionnaire: 61 of 65 (93. 8%)

Number Answering - Personal Interview: 11 of 15 (73. 3%)
Total: 72 of 80 (90. 0%)

	MAIL		PERSONAL		TOTAL	
Answers	Number of Responses	Percent of 61	Number of Responese	Percent of 11	Number of Responses	Percent of 72
Excellent	13	21	--	--	13	18
Very good	2	3	--	--	2	3
Good	16	26	3	27	19	26
Fair	3	5	2	18	5	7
Poor	3	5	2	18	5	7
Don't know	25	41	1	9	26	36
Other	36	59	2	18	38	53
Total	62	100. 0%*	12	100. 0%*	74	100. 0%*

* Rounded to 100. 0%

Faculty Intern-Fellowship Program

The practitioners are in favor of the program (82%), and feel it stimulates development of teachers but is a tough program to sell to their firms (Table 49). The educators are also in favor (79%), but 13% are not aware of it. Table 50 lists the various educator comments concerning this "professor on loan to a firm" program. They generally state the experience helps to strengthen their teaching by exposure to the real world but many suggest that a better policy, specific guides, and more planning must be accomplished.

TABLE 49

PRACTITIONER SAMPLE

QUESTION: ARE YOU IN FAVOR OF THE N. A. P. M. SUMMER FELLOWSHIP-INTERN PROGRAM?

Number Answering: 56 of 75 (74.6%)

Answers	Number of Responses	Percent of 56
Yes	46	82.1
No	5	8.9
Never heard of it	2	3.5
Don't know	1	1.7
Other	2	3.5
Total	56	100.0%*

Number Answering: 31 of 75 (41.3%)

Comments	Number of Responses	Percent of 31
Stimulate teaching of purchasing	1	3.2
Must pay professor at his own rate and they should be young and sharp	2	6.4
Good idea, needs constant review	4	12.9
Not really successful--hard to sell to corporation; need performance	8	25.8
Don't really know that much about it	1	3.2
Should be centrally controlled	1	3.2
Difficult to implement; policy is hazy	3	9.6
Locals used it; no strong opinion or disinterested	2	6.4
Very expensive--can it be afforded?	4	12.9
Other	5	16.1
Total	31	100.0%*

*Rounded to 100.0%

TABLE 50

EDUCATOR SAMPLE

COMMENTS ON THE NAPM INDUSTRY FELLOWSHIP (FACULTY) PROGRAM.

Number Answering: 22 Mail plus 8 Personal
Total: 30 or 38% of 80

NOTE: Each comment was mentioned just once unless a number appears at the end of the comment.

Comments

1. From previous experience, not interested; the company switched teachers and didn't let us know why.
2. Idea is great, but the machinery is cumbersome.
3. Personally benefitted from this. Provides contacts with purchasing personnel and problems.
4. Good technique for enriching purchasing course in college.
5. More opportunities should be available to college instructors with stipend large enough to allow time off from summer teaching.
6. Great. I participated and would like to do it again.
7. Beneficial in two ways. (1) Brings invaluable assistance to the firm. (2) Brings life to things we are teaching.
8. From past experience in program, it helped my teaching.
9. Too marketing teacher oriented and not enough toward management. Many interns are only interested in sales distribution and not materials management. Senior professors ineligible but they could be effective in the program.
10. Good promotion for NAPM. Should broaden the educator and provide additional income. Creates interest for research topics for doctoral candidates.
11. After being accepted by a firm, a person from another school was pulled in at the last moment. No explanation was even given.
12. Good if educator has some business experience and some rapport with business.
13. Basically an indoctrination program in the long run.
14. Personal experience - very rewarding. It added to the effectiveness of my purchasing teaching.
15. If the program at the company is merely an unplanned experience, cheap consulting or both, the teacher may find other fields to be more rewards.

TABLE 50 (Continued)

EDUCATOR SAMPLE

COMMENTS ON THE NAPM INDUSTRY FELLOWSHIP (FACULTY) PROGRAM.

16. Teachers are useless in these jobs, but do improve their knowledge.
17. Student internship program might do more for industry in the long-run.
18. Helps orient younger faculty.
19. Set definite guidelines when organizing.
20. Needs wider exposure, few know of it.
21. Good. Helps the professor remain industry-oriented.
22. Companies do not plan for the program.
23. Don't deceive the firm, basic purpose is to give professor practical experience.
24. It must be planned, he can't just "sit and watch."
25. Joint cost sharing is good - stimulates planning - firms must avoid trying to get "cheap consulting."
26. Company should pay most of it but don't try to match professor's salary. You might just get the "job seeker."
27. Matching costs are good.
28. Good, but can't work as a total program; costs too high.
29. Must match faculty rate, why should he pay--you will attract weaker faculty.

NOTE: No percentages are calculated because of the low number of common responses.

Doctoral Fellowship-Scholarship Program

As one would expect, 71% of the educators are in favor of continuing the N.A.P.M. Ph.D. assistance program. However, 18% were not aware of the program but the question wording may not have been clear (the word "fellowship" was not in the question). The educators rate the program very high (64%). The practitioners are also in favor of the Ph.D. program 63%, but again, 11% were not aware of it (Table 51); the comments reveal rather serious misconceptions concerning the program and the researcher perceived either blind voting (how can you be against educational assistance) and/or a very hazy understanding on the part of many respondents.

TABLE 51

PRACTITIONER SAMPLE

QUESTION: ARE YOU IN FAVOR OF THE N.A.P.M. Ph.D. SCHOLARSHIP PROGRAM?

Number Answering: 54 of 75 (72%)

Answers	Number of Responses	Percent of 54
Yes	34	63
Never heard of it	6	11
No	5	9
No Opinion	9	17
Total	54	100.0%

Number Answering: 12 of 75 (16.0%)

Comments	Number of Responses	Percent of 12
Ph.D. can supply the material	1	8.3
Who should pick topics	1	8.3
See no advantage	1	8.3
Not worth the money	2	16.6
Need established faculty member	1	8.3
Touch to get Ph.D.--too expensive	1	8.3
Member education is not enough	1	8.3
Other	4	33.3
Total	12	100.0%*

*Rounded to 100.0%

CHAPTER VII

CONCLUSIONS

This chapter combines the major findings of chapter VI and the secondary research from chapters II - IV into a series of deductions in a sequence according to the objectives stated in chapters I and V. To prevent redundancy, the details of the research findings and the literature search will not be repeated. The organization of the chapter is:

1. Purchasing Organization and Function
2. Position Descriptions and Job Duties
3. Purchasing Methods, Procedures and Techniques
4. Educational Requirements
5. College (2 years, 4 years, and graduate) Credit Purchasing Courses
6. In-Service Training (within the firm)
7. Adult Education (outside the firm)
8. Professional Society Educational Materials and Programs (N. A. P. M.)
9. Evaluation

Purchasing Organization and Functions

Purchasing functions and responsibilities are well defined in the literature and by major corporations. The primary functions are:

Requirement Coordination (not determination)

Some overstate the scope of purchasing's authority and role by quoting the typical or average purchased materials percentage (40 to 54% in this study) of the sales dollar. It must be remembered that operating departments and staff sections order or accept (if purchasing initiates a new idea) this material, equipment and services via requisitions within certain dollar limits usually established by financial, accounting and budgetary policies. We do not know what percentage of the total purchased materials merely go through purchasing with no other purchasing treatment than order placing. Even the various purchasing positions (including the vice president level) have dollar limits on order placements. The point is, purchasing cannot unilaterally determine the requirements except by agreement on highly repetitive, less critical and more routine items. In other words, the total corporation actually decides to spend 40 - 54% of the sales dollar, not the purchasing department. Not one job description or purchasing manual described in this report or in the entire study gave purchasing the final requirement determination.

The above comments should not be interpreted as minimizing the role of purchasing but rather to emphasize the staff service nature of the department. Purchasing can either react or respond to a requisition or it can suggest a new product idea or a reassessment of present buying action such as quality, quantity, source, etc. Any good staff agency does not merely respond to or "wait for" a request, they engage in "self-starter" activities to the fullest extent of their expertise and initiative. The truly professional staff engages in efficient and effective rendering of service when asked, and astute, timely and problem solving self initiated recommendations.

Thus purchasing has a shared responsibility for the quality and quantity requirement determination which emphasizes the coordination aspect of the function with engineering, marketing, production, finance and quality control. Purchasing cannot and this research indicates the "better" purchasing departments do not attempt an expansion of authority per se; they do attempt to expand their expertise to help solve the objective of efficient procurement and increased profits. In this respect, the opportunity for purchasing to make a real contribution to profits is enormous due to the leverage of a \$1.00 cost reduction versus an additional \$1.00 in sales. The point is simply, the mere quoting of the amount of purchased materials is rather useless unless the department has the ability and well formed plans to conserve corporation dollars.

The Procurement Decision

At this stage in the procurement cycle, purchasing plays a key role as verified by the job descriptions and findings in this research. This is the heart of the purchasing function. Miscues at this stage can cost the company in a multitude of ways. First, the pure additional cost per purchased unit, second, the decrease of the profit per sale or the automatic raising of product prices which may affect elasticity of demand in the direction of lost sales, third, additional inventory cost thru unused, obsolete, or inappropriate material or through the increased inventory of finished goods (with an unexpected sales drop) and fourth, decreased sales caused by lack of product supply traced to procurement bottlenecks.

The detailed duties include: vendor sourcing and evaluation, cost/price analysis, value analysis, commodity forecasting, make or buy analysis, standards determination, opportunity cost analysis, and budget considerations.

The Procurement Process

This is the final stage in the cycle and the point of legally binding allocations (over time) of company resources. It is another key purchasing function which can a aggravate the miscues already mentioned in the second stage.

The detailed duties are negotiation, final cost/price analysis, scheduling, vendor selection, and contracting including: systems contracts, sub contracting, product life cycle contracts, legal considerations, and expediting.

Materials Management

Approximately one third of the purchasing departments are responsible for stores, scrap disposal, shipping, receiving and traffic. One could call these auxiliary functions and specialists are employed to perform these duties. It seems that purchasing primarily performs a pure supervisory role over these departments for want of a better place to group them; they are related but cannot be considered primary purchasing functions. For instance, the traffic manager of a large corporation will have his own set of skills and knowledge of a rather detailed nature and while the purchasing manager and buyer need to be familiar with traffic problems, they do not need to know the detailed tasks. The same observations can be made for scrap disposal and stores; in fact, these functions including traffic did not appear in the survey as problem areas and they were seldom mentioned.

If one accepts the formal definition of materials management, one must include total inventory and production control. Relatively few materials or purchasing departments were responsible for these functions. Purchasing does play a major role in the inventory position of a company and 20% of the firms did have raw material or parts inventory control; very few had control over work-in-process and finished goods inventory. Only 9% had production control authority.

While 55% of the practitioner sample felt purchasing would evolve into the materials management concept about half of these respondents do not make production control and inventory control mandatory segments under control of the materials manager; the other 45% had reservations; either "no", "maybe" or "it depends".

In some respects, the materials management concept is analogous to the marketing concept in that both attempt to group similar functions together for maximum planning, control and organization benefits. However, there is a difference in that the marketing concept grouped one major line function, sales, with traditional activities which had historically supported sales, i.e., marketing research, advertising, sales promotion, service, cost analysis and new product specialists.[1] In several instances, marketing research was absent and was instituted with the initial reorganization into a marketing department.

There were several massive forces which helped stimulate the marketing concept such as intense competition for share of market, the technological explosion of new products which results in a shortening of existing product life cycles, a long history of academic concentration as one of the original major departments in the collegiate schools of business,[2] post WWII spin off war research projects, new foreign competition, the ever raising afluency, and development of sophisticated tastes and desires of the consuming public.[3] American business slowly changed from a factory oriented philosophy to a concentration on new product development, consumer buying habits, and marketing methods, rather than industrial buying.

It is important to realize that the sales executive and marketing executive are not synonymous positions; sales is just one very important marketing activity but all of the sub marketing functions have common end objectives. By contrast, the materials management concept is being stimulated by important but internal forces such as the computer, systems organization and the profit squeeze. Furthermore, inventory control and production control functions have historically been allied with manufacturing and finance, not purchasing; the marriage is less natural than the sales and advertising marriage. Where production control is now entrenched with manufacturing and is doing a good job in companies where machining or processing are more important than assembly and subcontracting, top management will be very reluctant to remove production control away from manufacturing management. The same situation may exist in firms where inventory control is now being efficiently handled by production, distribution or finance. In many firms, finished goods inventory is the responsibility of marketing and in others such as capital equipment made on an order basis only, the problem does not exist.

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[1] Richard L. Pinkerton, "How To Develop A Marketing Intelligence System," Industrial Marketing, Vol. 54, No. 4, (April, 1969), pp. 41-44.

[2] Robert Bartels, The Development of Marketing Thought (Homewood, Ill., Richard D. Irwin, Inc., 1962), pp. 29-38.

[3] D. Maynard Phelps and J. Howard Westing, Marketing Management (Third Edition, Homewood, Ill., Richard D. Irwin, Inc., 1968), pp. 11-15.

Whatever happens to the development of the materials management concept, the purchasing director and function remain -- just like sales remained under marketing. While the purchasing manager and technician should understand the broad principles of inventory -- production control, he certainly does not need this knowledge on a detailed, technical basis. Just who earns the promotion to materials management vice president or marketing vice president will depend on which sub function happens to be the most critical in the particular company and which candidate is the best potential executive; rarely would this candidate be an expert in all sub functions of either concept. This does not mean that purchasing personnel should not study the sub functions of materials management. Quite to the contrary, they should but not to the same proficiency level as those working in these specialties.

Position Descriptions and Job Duties

The hierarchy of purchasing positions is well established in the literature and in company job descriptions. There is rather wide agreement as to the specifics of each position with slight organization variances per firm. Buyers are graded by a number and adjective system designating ability to procure according to various degrees of complexities and supervisory duties. As he leaves the junior buyer or entry level I and progresses thru the steps to senior buyer, purchasing manager, agent or director, he buys more complex, costly and irregular material and increases his supervisory and managerial duties. The objectives are the same, to execute an efficient and effective procurement cycle, only the responsibility level changes.

Purchasing Methods, Procedures and Techniques

Both the educators and practitioners agree that electronic data processing, negotiation, value analysis/engineering, communications, general management skills, price/cost analysis, human relations, planning, vendor evaluation, and inventory control are very important purchasing management techniques. Generally, the educators were not as much in agreement with the various techniques as the practitioners and in some cases such as "OR-math decision theory", practitioners rated it 36th and educators 4th in importance.

All of the techniques and methods have been identified in the literature and it cannot be said that the study identified any methods not cited in current purchasing literature. In fact, even under broad materials management concept, approximately half of the 45 techniques are of a general management nature appropriate to any business functional area.

Educational Requirements

The necessary educational experiences are not well defined according to each position level. On the other hand, the work experience and performance requirements are fairly well defined for each position although not always in writing. This is not too surprising as one would expect most business functional areas to concentrate on entry qualifications which are largely fulfilled at college. The mature replacement or recipient of a new managerial position is recruited largely on the basis of past record, actual work performance, special executive personality, and I.Q. tests.

However, the examination of position descriptions indicates that key purchasing educational experiences must be the cognitive powers of knowledge, comprehension, application, analysis, synthesis and obviously, evaluation. He is a continuous problem solver with the additional demands of coordination, human relations and all the affective powers needed to deal with all kinds of internal company personnel and the external representatives from other firms. He must possess a high degree of communication skills to properly develop rapport and empathy in his many lateral relationships with other internal company departments and vendor departments.

In fact, one must conclude that for purchasing management, communication, coordination, persuasion and other empathy -- human relations abilities are far more critical than technical experience and talent.

A word of caution, he does not "manage the vendor's business" a phrase which is creeping into a few speeches but he does perform liason, coordination and advisory functions. He is a manager of commodities with a primary need to know managerial economics, forecasting, financial analysis, cost accounting, EDP, organizational theory, quantitative decision theory, psychology, sociology, and other business subjects. He needs to have a mechanical aptitude and interest with college level calculus.

Only in a few firms would he need formal courses in engineering except in firms dominated by engineering executives who are personally biased and want a familiar union card. However, the literature search and the findings of this research do not provide a rationale which could justify the engineering requirement for purchasing. Certainly the engineering degree would help the purchasing man, but the advantage seems marginal when compared with the cost of the education and the loss of economic exposure and the business subjects so essential to the job. Purchasing must learn to obtain the technical assistance from other departments when this is needed. One could also argue that the educational talents of a nation are somewhat diluted or misallocated when individuals pursue formal and expensive professional programs but subsequently fail to work at their prepared vocations.

College (2 years, 4 years, and graduate) Credit Purchasing Courses

B.A. and M.B.A. Collegiate Courses

For personnel with eventual management ambitions in large firms, the 4 year college degree will be mandatory with a general Business Administration degree preferred. There is very little support for a purchasing major at either the B.A. or M.B.A level. One or two purchasing courses appear to be sufficient specialization.

Implicitly, the respondents in the sample and the literature appear to have an optimistic view of learning transfer theory. They do not feel that purchasing requires special application study in the form of direct transfer courses such as forecasting for purchasing, personnel administration for purchasing, purchasing math, purchasing inventory control, etc. One might conjecture that the respondents embrace the Judd generalization theory but we can be definite in stating they obviously generally agree with the Gordon-Howell-Pierson reports of 1959.

The number of purchasing course offerings seem to have stabilized and while the practitioners are divided as to the future number of courses, educators are more optimistic and feel they will remain the same or expand.

Junior Colleges

The junior colleges have a definite role to play and the firms are willing to hire their graduates. In particular, the small firm can benefit from this program as their top management turnover may be low and hence, their big need is for technicians and junior management who may not require the 4 year or M.B.A. background. Also, small firms may not be able to pay the salaries required to attract personnel with advanced education.

Purchasing executives must remember there is a problem concerning the number of existing and potential purchasing positions. Educational institutions of all kinds must find a demand for their courses or they are eliminated just like the dead product on the store shelf. The U.S. government estimates that manufacturing firms employ 75,000 purchasing agents and buyers; compare this with the U.S. estimate of 625,000 manufacturers' salesmen excluding all other marketing positions and managerial positions. On this basis alone, institutions could hardly justify purchasing majors and degrees. This has nothing to do with importance (there are very few professors) but it must be remembered that the city of Chicago could not supply enough demand for the IIT program.

There are and will continue to be a few institutions which will specialize and may become centers of purchasing training just as two leading institutions offer hotel management degrees. All institutions develop a few special programs thru historical accident and/or peculiar demand factors. For example, it is logical for George Washington University to establish a M.B.A. degree in Government Purchasing; this institution is in the center of a specialized market with students already working in the field. It would be absurd for the University of Wisconsin to offer such a degree for a student body with .05% or even 1%? who may take a government purchasing position upon graduation.

By way of summary, there is insufficient rationale and support for a specific or formal college curriculum for purchasing. In the educator sample, not one respondent listed himself as a professor of purchasing nor did any list or reference a purchasing department. The educational requirements are drawn from existing fields and core subjects in economics, finance, accounting, marketing, organization theory, psychology, sociology, production and general management. If there were a large demand for purchasing specialists, then there might be merit and economic justification in grouping students together. In fact, a few schools in large cities with night school enrollment of students already in the field do just that and for all practical purposes, these courses could be classified as adult continuing education.

A number of practitioners and educators seem to be recommending a purchasing degree and/or major for status and academic recognition purposes. While these reasons are not legitimate curriculum rationale for academic institutions, the importance of purchasing can be developed on economic justification and is not dependent upon the existence of formal degrees.

In-Service Training (within the firm)

A large percentage of personnel development must be accomplished "on the job" just like the young apprentice lawyer or resident intern in medicine. Not only is the training expense a "legitimate cost of doing business", but it is improper for a company or a group of private firms to try to shift this expense to any degree program of institutions serving all industry, states, regions or the entire country. In fact, one of the criteria for admission to AACSB membership is the absence of political influence. Remember, we are talking about degree and credit programs, not adult extension courses.

The findings of this research and articles in the literature suggest that excellent company training is possible. Most educators would expect the firm to teach the detailed procedures and special commodity buying principles. For example, a strong case can be presented for stating that the broad necessary academic background of a good negotiation is psychology, sociology, and communication skill. If one reads a general book on negotiating, it becomes apparent that the background course work is the same for law, political science, marketing, and the rest of the negotiators.[4] Therefore, let the institutions teach the broad foundations and encourage the firm to teach a specific application. Anyone who has taught a college course, knows the difficulty of simulating certain environments to 20-21 year old pre-employment students. It is more effective to teach negotiation to the person already employed and highly motivated to learn the negotiation technique of a particular firm. On the other hand, educators have long discovered the difficulty of teaching broad principles or general background courses to businessmen interested in solving specific problems.

Each firm must "audit" their own personnel against position descriptions in order to design appropriate company training programs.

Adult Education (outside the firm)

Another heavy percentage of the total purchasing education job must be accomplished in university extension courses, seminars, and other adult education organizations. Contrary to popular belief, this method might be more important to the small firm than the large company. The small firm probably cannot justify any formal inplant training.

The adult programs can and do provide excellent opportunities for executive, middle management, technical and entry training and education. While purchasing personnel look to the universities for adult education programs, they have very little idea as to what specific topics and subjects should be offered. The minute any person feels he has learned it all, he is intellectually dead. Adult learners must be careful to distinguish between information and education. Education implies a behavioral change and while information is essential, it is not by itself, educational. For instance, the N. A. P. M. national convention is a productive activity for motivation, information, and inspiration; but the 1 hour cameo sessions and luncheon speeches cannot be classified as true educational experiences; however, the speakers do have an important information and stimulation role. Multiple day, week or evening sessions which require active participation on the part of the student can be educational if the student in fact makes a positive and lasting change.

Certification programs are not popular which may reflect the conclusion that purchasing is not a profession in the way we traditionally define the term.

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[4] Gerard I. Nierenberg, The Art of Negotiating: Psychological Strategies For Gaining Advantageous Bargains (New York: Hawthorn Books, Inc., 1968).

Professional Society Educational Materials and Programs (N. A. P. M.)

N. A. P. M. has been a powerful educational force and its programs probably prevented a massive reduction in the number of purchasing course offerings. The intern, doctorial fellowship, research grant and academic membership programs have been a major stimulus in promoting research and the availability of interested and capable faculty.

In summary, the organizational structure of purchasing education seems to be:

1. College Degree

   B. A., some M. B. A., some AA, broad business background, limited specialization, one or two purchasing courses.

2. In-Plant Company Training

   Specific purchasing procedures, policies, the industry, the firm, case histories, negotiation, etc.

3. Adult Education (External to the Firm)

   Remedial, new techniques, applied management and executive training, and entry training for the new buyer.

4. Association - N. A. P. M. and Others

   Education, motivation, information and professional fellowship.

Evaluation

While this research excluded a specific attempt to study formal evaluation methods in curriculum development, much of the foregoing in this chapter and other sections of this study have dealt with evaluation of personnel job performance. The real evaluation of all purchasing education and the students must be on the job performance record. This is true of all business students as the laboratory is not on the campus, it is in the firm with the "doers". Several purchasing position descriptions are included in this study and the list in Appendix F appears to be realistic. The firms with formal evaluation programs are indeed wise; personnel cannot improve upon what they are not told. There are still far too many terminated employees from all functional areas who leave "shocked" or with the quote, "they never told me". Again, while the educator must use a grade in the classroom, the business teacher has a very long wait for the final report card on his students.

Certification is not a valid business evaluation instrument and purchasing men are quite correct in rejecting this status symbol approach. They have realized that the businessman must strive for ethical, professional, and profitable execution, not symbolism.

CHAPTER VIII

SPECIFIC RECOMMENDATIONS

This chapter includes a recommended undergraduate business school curriculum appropriate for individuals interested in purchasing-materials management and specific suggestions for the National and Local N.A.P.M. organizations, practitioners, educators, and suggestions for additional research.

CURRICULUM RECOMMENDATIONS

Table 52 lists the "appropriate" courses for those undergraduate students interested in purchasing-materials management. It is important to point out that this recommendation constitutes a general management major with emphasis on production and cannot be considered a purchasing-materials management major. This approach is in agreement with the findings and conclusions in this study which call for a general, liberal or broad approach with emphasis on behavioral science and quantitative analysis.

Appendix G lists the current N.A.P.M. curriculum and it should be noted that the recommended curriculum eliminates 12 hours of specialized purchasing materials management courses. It also replaces supervisory management (3 hours), personnel management (3 hours), and industrial psychology (3 hours) with the newer discipline, organization theory (3 hours) which includes advanced aspects of industrial psychology group dynamics, and human relations.

Emphasis has been placed on decision making and quantitative analysis applicable to all business decisions and this justifies the courses in statistics, operations research, electronic data processing, accounting and production planning--inventory control.

Money and banking has been eliminated because of its emphasis on the Federal Reserve system which is appropriate for a economics major but over specialized for a general business program which leans towards production. It is critical to remember that the recommended curriculum assumes a sound preparation in economics, psychology, sociology, english, speech, math, science and the arts during the students first two years in the literature, science and arts colleges. If a business school has a 4 year undergraduate program, the curriculum should make provision for these foundation courses.

A foundation in behavioral science is provided in the first two years with business applications included in the organization theory and principles of management courses. The business society course reflects the current need for all businessmen to strengthen their awareness of business relationships to national social and economic problems as well as ethical conduct; this course should have a direct relationship to business law.

The specific course outline in the N.A.P.M. Professional Educational Standards Program, pages 4.4.18 - 4.4.28 (Guide To Purchasing) is adequate except that the sections on forms, records, and manuals should not be over emphasized as these

TABLE 52

APPROPRIATE COURSES FOR PURCHASING-MATERIALS MANAGEMENT BASED ON A JUNIOR-SENIOR UNDERGRADUATE SCHOOL OF BUSINESS PROGRAM

COURSE	NO. OF SEMESTER CREDIT HOURS*	
Business Core Requirements		**30 Hours**
Principles of Accounting, I & II	6	
Managerial Economics	3	
Principles of Business Law	3	
Principles of Finance	3	
Principles of Management	3	
Principles of Marketing	3	
Principles of Statistics	3	
Business and Society	3	
Business Communications	3	
Senior Courses Relevant to Purchasing		**30 Hours**
Materials Management	3	
Production Management	3	
Managerial or Cost Accounting	3	
Organizational Theory**	3	
Production Planning & Inventory Control	3	
Advanced Statistics	3	
Electronic Data Processing	6	
Operations Research	3	
Forecasting	3	
Total 2 Year Requirements in Semester Credit Hours		**60 Hours**

NOTE: This curriculum assumes the student has taken 3 hours of Psychology, 3 hours of Speech, 3 hours of Sociology, 12 hours of English, 6 hours of Calculus and 6 hours of Economics in the first two years.

* Based on 2 semesters per year, where a credit represents 15 classroom hours.

** Includes Industrial Psychology

topics vary according to particular firms and such detail is better handled in company training and other external adult education programs. Capable students with high quality instructors should be able to complete this course outline in one 3 hour course. If a second course is offered, it should be confined to written case analysis with considerable library research and emphasis on a total logistics--materials management system.

Any individual who has worked in curriculum planning has discovered what may appear as an obvious restriction but one which is often overlooked by the amateur, the time restriction and resultant necessity for priority determination. Students following a degree program simply do not have the time to take all the courses one would desire. This is why the recommended curriculum does not include traffic, quality control, personnel management and other "nice to know" but not essential subjects.

It should be pointed out that business school curricula are dynamic and changing constantly. What was being taught five years ago may no longer be taught for various reasons, not the least of which is the upgrading of education which is taking place nationwide at the high school and first two years of college levels.

No recommendations are included for the graduate business programs except for the offering of the materials management subject (one 3 hour course) as an elective. The graduate student can always elect several senior level courses already mentioned and it must be remembered that the M.B.A. degree is a broad, general program. The findings and conclusions do not warrant a "Master of Science in Business" program for purchasing even though the M.S. degrees in business do provide for specialized technical programs.

Junior college programs in purchasing do have a place for the technical level personnel and for those individuals who cannot obtain the 4 year degree. The Fullerton Junior College, Fullerton, Calif., curriculum appears adequate with the realization that two year programs must be rather specialized.

THE NATIONAL N.A.P.M.

A rather extensive list of recommendations is offered to the National N.A.P.M. because this society has been and will continue to be the focal point and major organization concerned with purchasing education.

1. Refrain from active promotion programs for purchasing majors and/or purchasing degrees at colleges and universities.

2. If the present Professional Educational Standards Program (PESP) is continued, it would be appropriate to make the course changes as recommended in table 52.

3. It might be more appropriate to base the requirements for the certificate (not certification) on a combination of credit for degrees plus attendance at N.A.P.M. approved adult seminars and evening classes [credit or non credit]. It should be possible for a person to earn the recognition certificate solely by going to non degree credit seminars over a five year period. A length of service requirement can also be added, say five years as a N.A.P.M. member two years credit for a B.A. degree and three years credit for an M.B.A.

N. A. P. M. should remove itself from the college credit determination business including equivalency examinations. A general exam could be given at the close or during one of the N. A. P. M. seminars. In other words, make it possible for employed persons to win this award. Under the present program, it could take a man from 3-6 years at night school and if he is going to put this much effort into education, he should be in a degree program.

4. The course outline, listed on pages 4.4.18 - 4.4.28 of the Professional Educational Standards program can be handled in one semester by capable students. The second semester would be a written case course with library research and perhaps the Pooler text or one of this type.

5. Work with faculty via the academic membership to stimulate the offering of one or two degree courses and adult education programs.

6. Stimulate faculty interest via the research grant program, doctoral fellowship and industry fellowship. This is essential for faculty perpetuation and research contributions but these programs need professional caliber publicity directed at the colleges and universities. N. A. P. M. members are rather confused over purpose, content and policy. The national will probably have to conduct these programs with help from the locals.

The industry fellowship program must be aimed at the new Ph. D. (who's looking for summer work to pay debts) and the senior professor who can afford it and feels he needs another industry exposure. In other words, get the attention of the young Ph. D. before he develops other academic interests and commitments.

Companies must plan for this program and provide projects other than the rather useless "observation" tour. Utilize the professor in such projects as designing college recruiting programs, writing purchasing manuals, designing educational --training programs or in special research projects. The national will probably have to develop a list of major corporations near universities and who will budget and plan for this program. The professor--like all professionals must be paid his going salary rate (not consulting rate). Then the company must avoid turning the program into a consulting job. Likewise, the faculty member must strive to pay his way, it can't be a nice quiet summer vacation. This program appears to be too sophisticated and time consuming for many local N. A. P. M. associations.

7. Develop a speaker-discussion leader list to facilitate planning seminars and other adult education programs.

8. Do not encourage undergraduate student scholarships; particularly those with stipulations of enrollment in the purchasing course or program. While scholarships are indeed benevolent, students rarely make a vocational decision until the campus recruitor arrives. Cash awards at the senior level for academic excellence in business might be much more effective in attracting the better students to purchasing. Research grants at the M. B. A. and Ph. D. level automatically create an interest (he has to do the research).

9. Avoid developing student chapters and memberships. They require a huge number of full-time students going for a major in the field. Demands on student time are so enormous that attendance at the academic type clubs is very low.

10. Institute a "Purchasing Professor of the Year" award and a special practitioner award for purchasing educational contributions. Perhaps the practitioner award could be called the Lewis Medal in recognition of the pioneering work of Professor Lewis at Harvard. There could also be a traveling Pro D trophy for the outstanding local Pro D program.[1]

The above incentives are recommended because the present N. A. P. M. manuals, Continuing Education Manual and Universities and College Program, are unique and excellent; the problem seems to be to stimulate their use. There are reports that many Pro D chairmen do not have the manuals and it might be wise to have the national mail them direct to individual Pro D chairmen.

11. Publish a complete directory of its membership, including the associate members and similar categories. Most major business organizations do publish such directories. Secrecy with regard to membership lists is not the mark of the professional group.

Such a listing would prove invaluable to researchers who are today unable to scientifically sample the purchasing practitioner. Members themselves would benefit since such listings are frequently used when available by firms seeking higher level employees. This directory would also be invaluable to universities and others presenting adult educational programs in purchasing since it would provide a means of communicating with those who benefit from such programs.

Most professional societies are proud to announce their membership; why not a Who's Who in Purchasing.

12. Work with the various institutions that provide correspondence and programmed learning courses. At least two courses, basic and advanced, should be available to members in locations with little or not purchasing educational opportunities.

13. Provide an advanced yearly directory of adult purchasing programs (all available, not just N. A. P. M.) to facilitate forward planning by members.

14. Investigate the possibilities of student internship or cooperative educational programs with junior colleges and technical institutes. Local associations can then follow-up if the idea has merit.

15. There is some merit in establishing classes of membership, i.e., fellows who have rendered distinguished service to N. A. P. M. ; seniors with ten or more years membership and regular for the others. Attendance at one or two N. A. P. M. national seminars might also be a prerequisite for "senior" membership.

16. Continue to support the Harvard Executive Program and possibly one more on the west coast if the demand is sufficient. Continue the regional expansion of the middle management programs at Michigan State, Arizona State and Oklahoma. Initiate an entry course, 3 days or one week, for the "new buyer" at the institutions listed above or others. Avoid canned programs for collegiate faculty use, they want

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[1] Pro D is the official N. A. P. M. abbreviation for Professional Development Activities Committees, both local and national.

to prepare their own with guidance but few would want to deliver sessions prepared by others.

17. Establish the position of National Director of Education and provide him with the necessary staff support. It can be pointed out that adult educational programs tend to be self-supporting financially.

18. Offer packaged programs for use by smaller locals in areas remote from academic institutions. This can be done by using the outlines, materials, and key speakers from the Michigan State, Arizona State, and other regional N. A. P. M. programs.

LOCAL N. A. P. M. ASSOCIATIONS

1. Concentrate on cooperation with local university extension (adult) noncredit programs, courses, and seminars.

2. Help support credit courses (one or two) through your academic members.

3. Do read and follow the N. A. P. M. Continuing Education Manual and Universities and Colleges Program manuals; both contain excellent guidelines and examples.

4. Do have "appropriate" business speakers at your monthly meetings; avoid the entertainment speaker delivering irrelevant subject matter (sports figure, TV personality etc.).

5. Continue the pre-dinner meeting workshops; they seem to be effective when planned by good discussion leaders.

6. Support the National N. A. P. M. Education Program and policies. The power, prestige and program continuity must come from a total national effort.

N. A. P. M. MEMBER (PURCHASING MANAGEMENT)

1. With position descriptions as a guide, compare your present personnel for educational deficiencies. Determine specifically what you feel should be prerequisite formal education (college level), what can and should be provided within the firm, what must be added from outside the firm in formal adult education programs and what remedial education (if any) is needed.

2. Translate your training program into a written policy. Plan and budget for adult education one year ahead.

3. Recruit at colleges and universities with a dramatic brochure about purchasing, procurement and materials management. Stress the business manager aspect of procurement and get to know one or two key professors and the placement officer.

4. Support N. A. P. M. and university research and educational programs.

5. Refrain from confusing consulting with adult education. Attendees at adult education programs cannot expect to have the program leaders solve specific company problems. The purpose of adult education is to provide the educational experience necessary to improve the individuals general problem solving abilities, not to solve

a particular problem for the student.

EDUCATORS

1. This study should provide the necessary background, material and future forecast for a review of purchasing courses, credit and non credit (adult). Purchasing teachers should analyze their own courses for compatibility with or variance from the findings and conclusions and recommendations of this report. Specifically, questions concerning course objectives, topics, and learning theory should be examined.

2. The listing of purchasing techniques, methods and procedures in the findings provides a detailed list of topics for both adult and degree credit courses.

3. For the curriculum professor, the study probably raises more questions than it answers. However, it is suggested that the education professors ask themselves, "Is present curriculum theory and practice as taught in the School of Education transferable to the collegiate School of Business?" If it is and I believe it is, then curriculum courses should be broadened to include materials appropriate to 4 year and graduate education. Adult education and junior college level programs appear to be receiving adequate specialized treatment in education schools, but the university curriculum (not just business) appears neglected.

4. Purchasing educators must and many do realize that instruction in and design of adult seminars cannot be handled in the same way as the typical credit course which is part of a degree program. Student participation and need determination methods are just two major differences in adult education. Purchasing educators should seek the advice of experienced adult educators when planning programs in this area.

SUGGESTIONS FOR ADDITIONAL RESEARCH

1. One interesting project would be a controlled work measurement study to determine the proportion of time spent at various purchasing duties on a daily basis. Statistical work sampling techniques could be used with a representative sample of firms. The results should help determine by purchasing position, the degree of importance of each duty and task and how much educational effort is needed to improve each task and the overall job.

2. Some attempt should be made to accurately measure the total number of purchasing positions at various levels. This could be a good master's level paper or a team project in a purchasing course. The figures referenced in this research are estimates and a statistically reliable estimate is needed to resolve the question of need. Just how many purchasing personnel need what type of education. This research does collate the past estimates, but a more accurate count is necessary.

3. Several references to transfer theory have been made throughout this study. Perhaps a team of purchasing teachers, curriculum educators and educational psychologists could conduct controlled experiments with special test instruments to investigate the hypothesis in this study which suggests that there is a general transfer of business subjects adequate for the purchasing field.

4. The materials management concept needs an objective in depth study. One possible approach would be to study firms who have tried the concept and succeeded,

tried and failed, and those who have researched the concept but have taken no action. It appears possible to identify certain physical, psychological, economic, and organizational constraints which can be used to evaluate whether a particular firm should attempt to employ the full concept of material management.

5. Rosters of the Harvard, Michigan State, Wisconsin, Oklahoma, Arizona and other formal adult purchasing programs are available. A follow-up study of attendees could be conducted to determine the degree of behavioral change, recommendations, and changes in job performance (if any). The present methods of immediate post program evaluations in the form of rating sheets, are really "happiness scores" or speaker-leader personality ratings and tell very little--if anything about what happened to the student. It probably takes at least six months to a year after the program to measure the success or failure.

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APPENDIX A

PURCHASING PROGRAMS OFFERED BY THE AMERICAN MANAGEMENT ASSOCIATION NEW YORK

I. Workshop Seminars - May-October, 1968
   A. Advanced Purchasing - The Chief Purchasing Executive's Job.
   B. Application of EDP to the Purchasing Function
   C. Cost/Price Analysis - Evaluating Your Suppliers' Pricing
   D. The Job of the Traffic Manager
   E. Managing Order Picking Operations
   F. Operation of the Company's Private Truck Fleet
   G. Organization and Management of the Purchasing Function
   H. Performance Measurement - Developing Yardsticks and Standards of Performance to Measure Purchasing's Contribution to Profit
   I. Planning and Installing Mechanized Warehousing
   J. Practical Policies, Procedures and Techniques of Purchasing for the Smaller Company
   K. Purchasing Management for the Staff Purchasing Man
   L. Purchasing Research
   M. Systems Contracting - Blanket Order Purchasing

II. Orientation Seminars - July-March, 1969
   A. Effective Management of the Local Delivery Function
   B. Fundamentals of Purchasing for the Newly Appointed Buyer
   C. Modern Practices in Purchasing Management
   D. Operation of the Company's Private Truck Fleet
   E. Order Picking, Packing and Warehousing
   F. Organization and Management of the Purchasing Function
   G. Purchasing Management and the Computer
   H. Purchasing Negotiations

III. Courses
   A. Course in Effective Management of the Retail Buying Function
   B. Course in Physical Distribution Management
   C. Course in Purchasing Management
   D. Course in Transportation Management

APPENDIX B

NAPM EDUCATIONAL RESEARCH PROJECT

Conducted by the University of Wisconsin
Graduate School of Business, Madison, Wisconsin 53706

Note: Practitioner Form & Combinations

Interviewer: R. L. Pinkerton Interview Date____________

I. **Classification:** ☐ Practitioner, ☐ Educator, ☐ Consultant,
☐ Author-Editor, ☐ Adult Education, ☐ Practitioner & Instructor
☐ Association, ☐ Education Advisor, Name:____________
☐ Student-Follow up. ☐ Other____________
____

II. **Respondent:**

Name____________
Title____________
Firm____________
Street____________ City____________ State____________
Zip____________ Phone____________

III. **The Firm**

S. I. C. Code(s)________, ________, ________, Major Products:
____
____

Div., Sub. of____________
Total Corp. employees____________, Production ees____________
Most recent yearly gross sales $____________ period____________
Percent of sales $ that purchasing controls________% ==________

IV. **Respondent Personal Data:**

Birth Date: M________, yr.________ Age:________.
No. of years with Co.____________, Total years in purchasing____________
Previous experience: ☐ Sales________ yrs. ☐ Production________ yrs.
☐ Engineering________ yrs. ☐ Accounting________ yrs. ☐ Finance________ yrs.
☐ Other____________
NAPA member: ☐ yes, ☐ no, ☐ past____________

Education: ☐ H. S. Diploma

☐ Under. college degree in ______________ from ______________ yr. ______

☐ Gra. college degree in ______________ from ______________ yr. ______

☐ Some college degree in ______________ from ______________ yr. ______

Did you take purchasing in college? ☐ yes, ☐ no. If Yes, what? ______________

____

Teaching:

Have you ever taught purchasing subjects? ☐ yes, ☐ no. If yes, what, where and when? ______________

____

____

____

____

Author of purchasing articles and/or books? ☐ yes, ☐ no. If yes, what?

____

____

____

What NAPM offices have you held? (Obtain resume if possible).

____

____

V. Your Purchasing Organization (Obtain org. chart)

1. Whom do you report to?

Name ______________ Title ______________

Who reports to him? (By title) ______________

______________ , ______________

______________ , ______________

2. No. of persons engaged in purchasing? (Include all levels)

a. Total Co. ______________

b. Under your direct supervision ______________

c. Under your indirect supervision ______________

3. What are the titles and major duties of persons listed in b & c on the preceding page? (Question 2)

Title Duties

______________________________ , ______________________________

______________________________ , ______________________________

______________________________ , ______________________________

______________________________ , ______________________________

______________________________ , ______________________________

______________________________ , ______________________________

______________________________ , ______________________________

______________________________ , ______________________________

______________________________ , ______________________________

4. What are your major responsibilities?

☐ Purchasing (Circle plant and/or total corp.)

- ☐ Capital Equipment p. c.
- ☐ MOR p. c.
- ☐ Office p. c.
- ☐ International p. c.
- ☐ Corp. R & D p. c.
- ☐ Commodities--Raw Material p. c.
- ☐ Other ____________________ p. c.
- ☐ Special Government p. c.

☐ Inventory Control

- ☐ Total p. c.
- ☐ Raw material p. c.
- ☐ Finished goods p. c.
- ☐ Semi- (work-in-process) p. c.

☐ Shipping p. c.
☐ Receiving p. c.
☐ Quality Control p. c.
☐ Traffic p. c.
☐ Value Engineering p. c.
☐ Value Analysis p. c.
☐ Stores p. c.
☐ Production Control p. c.
☐ Material Management p. c.
☐ Systems Contracting p. c.
☐ Other ____

____

____

____

____

5. Do you have written job descriptions? ☐ yes, ☐ no, ☐ in process.

6. Do you have an organization chart? ☐ yes, ☐ no, ☐ in process.

7. Do you have a purchasing manual or procedure book? ☐ yes, ☐ no, ☐ in process.

VI. Purchasing Educational Needs

1. Is your top management view of the importance--role of purchasing--materials management the same as yours? ☐ yes, ☐ no, ☐ somewhat, ☐ coming closer, ☐ don't know.

   Explain--What is your view? Their view? ____

   ____

   ____

   ____

   ____

   ____

2. Will the role, scope and function of purchasing change in the next 10 years? ☐ yes, ☐ no, ☐ don't know. If yes, how and in what direction?

   ____

   ____

   ____

   ____

   ____

   ____

3. Will purchasing evolve into the material management concept?

☐yes, ☐no, ☐maybe, ☐don't know.

Comments: ______

4. If a young H. S. graduate approached you and asked how he should prepare for a purchasing--material management career, what would you tell him?

______

5. What are your department entry hiring qualifications? In writing?

☐yes, ☐no. ______

Will they change in the 1970's. ☐yes, ☐no, ☐don't know.

If yes, how? ______

6. Do you prefer an Engineering degree for your personnel? ☐yes, ☐no,
☐just technical knowledge and familiarity for whom?
What kind of engineering?

7. What are the educational requirements for each of your purchasing positions?

Position	Education--degree?	Type

8. What are your purchasing management qualifications (for your firm)?

9. Will the qualifications listed in question No. 8 change in the next 10 years?
☐yes, ☐no, ☐don't know. If yes, how?

10. What purchasing--material management techniques, tools, methods and procedures do you consider to be important topics and subjects for purchasing education?

- ☐ EDP
- ☐ OR--Math Decision Theory
- ☐ Values Analysis--Engineering
- ☐ Learning Curve
- ☐ Economic Order Points
- ☐ Negotiation
- ☐ Systems Contracting
- ☐ Foreign Procurement
- ☐ Traffic
- ☐ Trade Relations
- ☐ Price--Cost Analysis
- Human Relations
- ☐ Purchasing Research
- ☐ General Math
- ☐ Reporting Methods
- ☐ Planning
- ☐ Directing
- ☐ Accounting
- ☐ R & D
- ☐ ROI
- ☐ Automation
- ☐ Marketing
- ☐ Sales
- ☐ New Product Procurement
- ☐ Ventor Evaluation
- ☐ Pert--CPM
- ☐ Blanket Orders
- ☐ Inventory Control
- ☐ Material Handling
- ☐ Sub Contracting
- ☐ Quality Control
- ☐ Make or Buy
- ☐ Special Government (DOD)
- ☐ Personnel Management
- ☐ Communications
- ☐ General Management Skills
- ☐ Internal Purchasing Evaluation
- ☐ Organization
- ☐ Controlling
- ☐ Financial Analysis
- ☐ Production Methods
- ☐ Production Control
- ☐ Legal Aspects
- ☐ Forecasting
- ☐ Problem Solving
- ☐ All of the Above

11. Will certain techniques etc. listed above become more important in the next 10 years? Are there any new procedures, skills, etc. (not listed) that will become important in the next 10 years?

12. Are there any unique management skills and knowledge for purchasing management?

☐ **yes,** ☐ **no,** ☐ **don't know. Comments:** ____________________

____

____

____

____

13. Do you prefer to hire all potential managers or do you hire some who either do not want or cannot handle a substantial increase in job responsibility? (i.e., can a man remain an assistant buyer etc. and are certain new personnel "pegged" for management possibilities) ☐ **yes,** ☐ **no. Comments:** ____________________

____

____

____

____

____

14. Should colleges offer a B.A. degree in Purchasing? (A major).

☐ **yes,** ☐ **no. Why?** ____________________

____

____

____

____

15. Should colleges offer an M.B.A. degree in Purchasing? (A major)

☐ **yes,** ☐ **no. Why?** ____________________

____

____

____

____

16. Should colleges offer purchasing courses? ☐ **yes,** ☐ **no, If yes, how many, what kind, and at what level?**

#	Kind	Level

Comments: ____

17. Would you be willing to hire a young man with a 2 year Associate Degree in Purchasing? Technician (Jr. college) ☐ yes, ☐ no,
☐ don't know, ☐ not sure, ☐ don't understand the 2 yr. program,
☐ yes--if he will go on for the 4 yr. degree or night school.

Comments: ____

18. How do you view vocational schools (post H. S. not associate degree) as a personnel source--if they had a purchasing program? ☐ favorable
☐ unfavorable, ☐ bad image, ☐ students too low-level,
☐ depends on the particular student, ☐ don't know. Comments:

19. What type of "in service" purchasing training program do you have?
☐ weekly staff meetings, ☐ in-plant courses, ☐ classes, ☐ OJT,
☐ correspondence, ☐ NAPM meetings, ☐ Adult education, ☐ night school--partial or full tuition paid by Company. ☐ Other ________

Is this program in writing? ☐ yes, ☐ no. Comments: ________

20. What Adult Education--Purchasing Management Seminars have you attended during the last two years (from 1966 to the present).

Title	Location	Duration

21. Please comment on the quality of adult education; how would you rate your experiences; please refer to question 17 and rate each program. E = excellent, VG = very good, G = good, F = fair, P = poor. Comments: ______

22. Why type of knowledge and skills (topics, subjects, etc.) should be offered in adult seminars, etc. (AMA, MSU, Harvard, UWMI, etc.)

23. What agency do you prefer to conduct (not sponsor). Adult education programs.

- ☐ **universities**
  - ☐ **extension**
  - ☐ **school of business**
- ☐ **AMA**
- ☐ **local NAPM**
- ☐ **National NAPM**
- ☐ **Consultants?** ____________________
- ☐ **Other** ____________________

____

Comments: ____________________

____

____

____

____

____

____

23. Do you agree with the NAPM Professional Educational Standards curriculum? (Show brochure) ☐ yes, ☐ no, ☐ not entirely. If no, or with changes, why? What do you suggest? ____________________

____

____

____

____

____

____

____

24. Are you in favor of certification? ☐ yes, ☐ no.

Why?
- ☐ **doesn't assure productivity.**
- ☐ **eliminates incompetence**
- ☐ **serves as an incentive to education**
- ☐ **don't see any purpose**
- ☐ **winners might think "they have made it"**

Other:

25. What type of business education do you prefer?
   - ☐ General-liberal
   - ☐ Specialized
   - ☐ Combination-general and specialized

26. What type of educational activities should local NAPM associations engage in?
   - ☐ Lunch meetings--guest speakers
   - ☐ One day
   - ☐ Post dinner meetings
   - ☐ Multiple day programs
   - ☐ Help local universities sponsor programs?

Other:

27. What type of educational activities should the national NAPM Association engage in?
   - ☐ Manuals on purchasing techniques
   - ☐ Visuals, case histories, films, etc.
   - ☐ Mail brochures of available educational opportunities
   - ☐ Organize traveling or regional workshops, seminars (not
   - ☐ sponsor but organize and direct via a special NAPM staff plus guest speakers).

Other and Comments: ____________________

28. What present NAPM education materials do you think are particularly valuable?

☐ Guide to Purchasing
☐ Movies ________, ________, ________
☐ Commodity charts
☐ Case kits
☐ Other ____________________

29. What purchasing magazines do you read?

☐ Purchasing Week
☐ Purchasing
☐ Journal of Purchasing
☐ ____________________
☐ ____________________
☐ ____________________

Please rate the above publications

E, VG, G, F, P.

30. What purchasing books and texts do you recommend?

☐ England, ☐ Westing-Fine, ☐ Aljian-Handbook, ☐ Lee & Dobler,
☐ Ammer, ☐ Heinritz-Farrell, ☐ Pooler. ☐ Other ________

31. Are you in favor of the NAPM Summer Fellowship-Intern program?

☐ yes, ☐ no, ☐ never heard of it.

Comments: ____

32. Are you in favor of the NAPM Ph.D. Scholarship program?

☐ yes, ☐ no, ☐ never heard of it.

Comments: ____

33. Who should we talk to?

Name	Title	Company	Address

EDUCATOR MAIL SURVEY

NAPM EDUCATIONAL RESEARCH PROJECT

Conducted by the University of Wisconsin
Graduate School of Business
1155 Observatory Drive, Madison, Wisconsin 53706
Richard L. Pinkerton

Note: Educator's Form Interview Date ______________

I. Classification - Institution

☐ 4 yr. College-University
☐ Junior college - 2 yrs. Associate degree
☐ Graduate School only
☐ Landgrant
☐ Adult Education - University affiliated
☐ Accredited - by whom? ______________
☐ Under & Graduate University
☐ Vocational School (Post Sec.)
☐ Private
☐ State Support
☐ Adult Education - Non-University affiliated
☐ Other - describe ______________

☐ AACSB Official
☐ Professor
☐ Adult Coordinator
☐ Author
☐ Dean
☐ Administrator
☐ Department Chairman

Enrollment

Undergraduate Business
Full-time ________
Part-time ________

Graduate Business
Full-time ________
Part-time ________

Total College - University Enrollment ______________

II. Respondent:

Name: ______________

Title/Rank: ______________

Institution: ______________

Street - Hall: ______________ City: ______________

State: ______________ Zip ________ Phone: ______________

Age: ________ Number of yrs. at institution ______ in education-total ______

Degrees held by respondent

	Major	Institution	Year
☐ BA*			
☐ MBA*			
☐ Ph.D.			

Note: When we use the word "purchasing", we also include procurement and materials management merely to save space. In your answers, please do differentiate the terms if this is necessary.

1. Author - books? ☐ **yes** **Title:**

2. Teach purchasing? ☐ **currently yes,** ☐ **never,** ☐ **at one time.**

Title, when and where?

3. How many total years teaching purchasing?

4. Total number of years experience with purchasing?
General purchasing background: (obtain resume if possible).

7. Have you ever taught purchasing at the adult level? ☐ **yes,** ☐ **no.**
If yes, where, when and type program.

Title	Date	Institution	Format and Length

*** Throughout this questionnaire, we use "BA" to designate undergraduate, and "MBA" for graduate; if BS or MS are appropriate, so indicate.**

III. Curriculum (Obtain course descriptions and catalogues, etc.).

1. What purchasing - material management techniques, tools, management methods will become more important in the 1970's? Please check those items that are the most important as all items on the list are important.

- ☐ EDP
- ☐ OR-Math Decision Theory
- ☐ Value Analysis - Engineering
- ☐ Learning Curve
- ☐ Economic Order points
- ☐ Negotiation
- ☐ Systems Contracting
- ☐ Foreign Procurement
- ☐ Traffic
- ☐ Trade Relations
- ☐ Price-Cost Analysis
- ☐ Marketing
- ☐ Sales
- ☐ New Product Procurement
- ☐ Vendor Evaluation
- ☐ Pert-cpm
- ☐ Inventory Control
- ☐ Material Handling
- ☐ Sub-Contracting
- ☐ Financial Analysis
- ☐ Production Control
- ☐ Forecasting
- ☐ Human Relations
- ☐ Problem Solving
- ☐ Purchasing Research
- ☐ General Math
- ☐ Reporting Methods
- ☐ Planning
- ☐ Directing
- ☐ Accounting
- ☐ R & D
- ☐ ROI
- ☐ Automation
- ☐ Quality Control
- ☐ Make or Buy
- ☐ Special Government (DOD)
- ☐ Personnel Management
- ☐ Communications
- ☐ General Management Skills
- ☐ Internal Purchasing Evaluation
- ☐ Organization
- ☐ Production Methods
- ☐ Legal Aspects
- ☐ Blanket Orders
- ☐ All of the Above

Comments:

2. Is there anything unique about purchasing management, i.e., the management aspects? (Not the technical tasks.) ☐ yes, ☐ no.
Comments:

3. What purchasing-material management courses are offered?

☐ Undergraduate, ☐ Graduate, ☐ None.

Course Title	Credit/hrs.	Duration	Level	Semesters*	Prerequisite
A.					
B.					
C.					
D.					
E.					

*Given each semester and summer?

Average Number of Students per semester. (Match with courses listed above)	Textbooks	Topics
A.		
B.		
C.		
D.		
E.		

Percent of BA (Undergraduate) students who take at least one purchasing-management course__________ %

Percent of MBA (Graduate) students who take at least one purchasing-management course__________ %

4. Do you have a MAJOR in purchasing or materials management?

BA		MBA	
☐ Yes,	☐ no	☐ Yes,	☐ no
☐ Plan to		☐ Plan to	
☐ Did have		☐ Did have	

Comments:____

5. Should there be a purchasing or material management major?

BA: ☐ yes, ☐ no.

MBA: ☐ yes, ☐ no.

Why? ______________________________

☐ BA ☐ MBA Yes, it is a separate field just like marketing, etc.
☐ BA ☐ MBA No, too narrow.
☐ BA ☐ MBA Not enough demand by students.
☐ BA ☐ MBA Insufficient subject material.
☐ BA ☐ MBA Topics covered in other courses.
☐ BA ☐ MBA Yes - need specialized application.
☐ BA ☐ MBA Depends on how you define purchasing.
☐ BA ☐ MBA Can't get it approved.
☐ BA ☐ MBA Not enough demand by industry.

Comments: ______________________________

6. How many purchasing and material management courses should be taught, at what level, and what type? ☐ none, ☐ one, ☐ two, ☐ three, ☐ four, ☐ other: ______________

Title	Level	Type - describe briefly

Comments: ______________________________

7. **Do technical firms need purchasing - materials management personnel with engineering degrees? ☐ yes, ☐ no, ☐ depends, ☐ no - just technical assistance.**

Comments:

8. **Will the number of college purchasing - material management courses**

☐ expand, ☐ contract, ☐ remain the same, in the next ten years.

Why?

9. **Should a purchasing - material management course be required for:**

BA		MBA		Elective (Not required)	
☐ yes,	**☐ no**	**☐ yes**	**☐ no**	**☐ BA,**	**☐ MBA**

Why?

10. **What is the curriculum philosophy of your school? What are the objectives of the BA and MBA programs?**

A. BA:

B. MBA:

Do you agree with the school policy? ☐ yes, ☐ no.

11. Is the philosophy of your school typical (in your opinion) of the leading* business schools? ☐ yes, ☐ no, ☐ somewhat, ☐ don't know.

Comments:

*Use your own definition of "leading".

12. What is your opinion of the NAPM curriculum? See the NAPM Professional Educational Standards Program.

☐ Favorable
☐ Have doubts
☐ Topics covered in other courses
☐ Insufficient subject matter for number of purchasing - material management courses
☐ Unfavorable
☐ Too specialized

Comments:

13. **What role could vocational and junior colleges play in purchasing education?**

☐ **none,** ☐ **some,** ☐ **significant,** ☐ **don't know.**

Comments: ____________________

14. **Is any adult purchasing education offered by your institution?**

☐ **yes,** ☐ **no; If yes, please describe**

Title	Duration	No. of Hrs.	Format-Level	Fee	Frequency per year

If no, why not? ☐ **lack of funds,** ☐ **lack of faculty interest,**
☐ **not enough faculty,** ☐ **not enough local interest,** ☐ **no facilities,**
☐ **school is not interested in adult education,** ☐ **little faith in the quality of adult education,** ☐ **industry should do this - firms, AMA, etc.**
☐ **Other:** ____________________

15. **Will your adult programs expand in the future?** ☐ **yes,** ☐ **no,** ☐ **not sure;** **If yes, in what direction and if no, why?**

16. **What is your opinion of adult programs? What topics should be taught and what format do you prefer?**

☐ **very favorable,** ☐ **favorable,** ☐ **they have their place,** ☐ **unfavorable.**

Comments: (What phases of purchasing can be taught at the adult level?)

17. **What type of person derives the most benefit from adult education?**

☐ **college degree**
☐ **manager level**
☐ **having problems**
☐ **other:**

☐ **age**
☐ **past success**
☐ **don't know**

18. In your opinion, what are the top 4 purchasing - material management textbooks? (In order).

1.____________________ 2.____________________

3.____________________ 4.____________________

19. What institutions are the most active in purchasing education (colleges and industry)?

1.____

2.____

3.____

4.____

5.____

6.____

7.____

20. What is your opinion of the AMA (management) purchasing program?

☐ ex. (excellent), ☐ vg. (very good), ☐ g. (good), ☐ f. (fair), ☐ p. (poor).*

Comments:____________________________________

____

____

21. What is your opinion of the NAPM Guide to Purchasing?

☐ ex., ☐ vg., ☐ g., ☐ f., ☐ p., ☐ don't know.

Comments:____________________________________

____

____

____

22. Are you in favor of certification for purchasing, i.e. a CPA or CPCU type program? ☐ yes, ☐ no.

Comments:____________________________________

____

____

***Same descriptions apply to other questions with these abbreviations.**

23. What type of education activities should local NAPM affiliates conduct?

☐ Lunch meetings ☐ Dinner meetings
☐ Workshops - one day ☐ Pre-Dinner meetings
☐ Workshops - several days
☐ Night courses of the one or two nights a week for so many weeks type.

Comments:

24. What is your opinion of the NAPM Industry Fellowship program? (Educator spends a summer with a firm).

☐ ex., ☐ vg., ☐ g., ☐ f., ☐ p., ☐ don't know.

Comments:

25. What is your opinion of the NAPM Ph. D. scholarship program?

☐ ex., ☐ vg., ☐ g., ☐ f., ☐ p., ☐ don't know.

Should it be continued? ☐ yes, ☐ no.

Comments: (Rate each example).

26. What is your opinion of the NAPM films, books, and case skits, etc.?

☐ **don't know.**

Comments:

27. What educational activities should the National NAPM provide?

- ☐ **Traveling - regional workshops coordinated by a NAPM staff.**
- ☐ **Provide publicity for college degree and adult programs.**
- ☐ **More manuals, books, etc. on techniques.**
- ☐ **More "canned" program kits.**
- ☐ **More films.**
- ☐ **Other:**

Comments:

28. Other educators and practitioners we should see?

Name	**Title**	**Institution or Company**	**Address**

APPENDIX C

UNIVERSITY OF WISCONSIN, SCHOOL OF BUSINESS, MADISON, WISCONSIN

NAPM PURCHASING EDUCATION STUDY

1968

I. PRACTITIONER SAMPLE - PERSONAL INTERVIEWS (Corporations, Editors, and Consultants)

70 individuals in 58 different companies plus 3 divisions or a total of 61 separate company entities plus 3 editors, 1 consultant and 1 NAPM executive for a total of 75 individuals.

Charles B. Adams
Manager of Purchases
General Electric Company
570 Lexington Avenue
New York, New York 10022
Assisted by:
D. V. Smith
Consultant - Material Education

G. W. Howard Ahl
Executive Vice President
NAPM
11 Park Place
New York, New York 10007

James E. Ahrens
Director of Purchases
Universal American Corporation
200 Park Avenue
New York, New York 10017

George W. Aljian
Editor-in-Chief, Purchasing Handbook
1750 Stanford Avenue
Menlo Park, California 94025

E. F. Andrews
Vice President - Purchases
Allegheny Ludlum Steel Corporation
Oliver Building., Mellon Square
Pittsburgh, Pennsylvania 15222

Mark T. Anthony
General Manager of Purchasing
Kaiser Steel Corporation
Kaiser Center
300 Lakeside Drive
Oakland, California 94612

Donald L. Axelson
Assistant Material Manager
North American Rockwell Corporation
Autonetics Division
Data Systems Division
3370 Miraloma Avenue
Anaheim, California 92803

George W. Baker
Director of Purchasing
The Port of New York Authority
111 8th Avenue at 15th Street
New York, New York 10011

Art E. Belter
Purchasing Agent
Wisconsin Motors Corporation
1910 South 53rd Street
Milwaukee, Wisconsin 53246

E. G. Berglind
Director of Purchasing
Rubbermaid, Inc.
1205 E. Bowman Street
Wooster, Ohio 44691

J. P. Bergmoser
Director of Purchases
Ford Automotive Assembly Div.
of Ford Co.
17,000 Oakwood Blvd.
Dearborn, Michigan 48121

Harold A. Berry
President
AFRO-American Purchasing Company
30 Church Street
New York, New York 10007

Harold Bloom
Material Manager
AVCO-Everett Research Laboratory
2385 Revere Beach Parkway
Everett, Massachusetts 02149

James E. Borchert
Vice-President, Automotive Division
A. O. Smith Corporation
3533 North 27th Street
Milwaukee, Wisconsin 53201
Assisted by:
Richard A. Wendorff
Corporate Director of Purchasing

Fred L. Brewer
General Purchasing Agent
A. O. Smith Corporation
3533 North 27th Street
Milwaukee, Wisconsin 53201

John P. Callahan
Purchasing Manager
Fisher Scientific Company
711 Forbes Avenue
Pittsburgh, Pennsylvania 15219

Arlo E. Carney
Director of Purchases
Beldon Manufacturing Company
415 S. Kilpatrick Avenue
Chicago, Illinois 60644

Harold W. Catt
Director of Purchasing and Traffic
The B. F. Goodrich Company
500 South Main Street
Akron, Ohio 44318

Lee Clark
General Supervisor
Material Administration
Material Division
3370 Miraloma Avenue
North American Rockwell Corporation
Autonetics Division
Anaheim, California 92803

Fred A. Coenen
Director - Purchasing
Rex Chainbelt, Inc.
4701 W. Greenfield Avenue
Milwaukee, Wisconsin 53201

Albert J. D'Arcy
Director of Purchases
Union Carbide Corporation
270 Park Avenue
New York, New York 10017

Harland E. Eastman
Corporation Purchasing Administrator
Beckman Instruments, Inc.
2500 Harbor Blvd.
Fullerton, California 92634
Assisted by:
Ted Novis
Corporation Purchasing Analyst

Marshall G. Edwards
Director of Purchasing
Olivetti-Underwood Corporation
One Park Avenue
New York, New York 10016

George A. Fadler
Vice President
Manufacturing Services & Materials
RCA
Camden, New Jersey 08102

Paul V. Farrell
Editor, Purchasing Magazine
Conover MAST Publications
Division of Cahners
205 E. 42nd Street
New York, New York 10017

Gailon C. Fordyce
Corporation Procurement & Analysis
The American Tobacco Company
245 Park Avenue
New York, New York 10017

Richard J. Fouquet
Director of Services
Fairchild of Semiconductor
313 Fairchild Drive
Mountain View, California 94040
Assisted by:
Robert B. Curlee
Purchasing Agent

Kenneth B. Gay
Vice President of Material
North American Rockwell Corporation
Aerospace & Systems Group
1700 East Imperial Highway
El Secondo, California 90245

Duncan Gregg
Director of Purchasing
Kaiser Aluminum & Chemical
Corporation
300 Lakeside Drive
Oakland, California

Edgar A. Grunwald
Editor-in-Chief, Purchasing Week
McGraw-Hill
330 West 42nd Street
New York, New York 10036

Glenn N. Hackett
Director of Purchases & Traffic
Thompson, Ramo Wooldridge, Inc.
23555 Euclid Avenue
Cleveland, Ohio 44117

James D. Hahn
Chief Purchasing Agent
University of California
(all campuses--not just Berkeley)
451 University Hall
Berkeley, California 94720

A. W. Hartig
Vice President, Purchasing
Chrysler Corporation
341 Massachusetts Avenue
Detroit, Michigan 48203

William H. Hedman
Director of Procurement
Bendix Communication Division
East Joppa Road
Baltimore, Maryland]1]04

R. E. Hennessy
Vice President - Purchases
National Distillers
& Chemical Corporation
99 Park Avenue
New York, New York 10016

William J. Heubach
Assistant Director - Purchases
Union - Camp Corporation
233 Broadway
New York, New York 10007

James M. Hill, Jr.
Director of Procurement
Raytheon Company
Spring Street
Lexington, Massachusetts 02173

Robert A. Hortvet
Pro D. Chairman
A. O. Smith Corporation
3533 North 27th Street
Milwaukee, Wisconsin 53201

W. Ross Johnston
General Manager of Purchases
Mobil Oil Company, Inc.
150 East 42nd Street
New York, New York 10017
Assisted by:
Donald L. Murphy
Manager of Planning & Analysis

Chester D. Jones
Director of Purchasing
Diamond Shamrock Corporation
300 Union Commerce Bldg.
Cleveland, Ohio 44115

Harold S. Jungbluth
Vice President, Materials
RTE Corporation
1900 East North Street
Waukesha, Wisconsin

E. C. Karl *
Director of Purchases
International Paper Company
220 East 42nd Street
New York, New York 10017

Jack Kirkbride
Buyer & NAPN District Pro D. Chairman
Charles Fruchtman & Company
Division of Donovan Wire & Iron
805 Chicago Street
Toledo, Ohio 43611

W. Hardy Klarquist
General Manager of Purchasing
Standard Oil Company of California
San Francisco, California
    Assisted by:
    W. W. Sharon
    Assistant Manager
    Purchase & Stores Department
    Western Operations

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G. R. Pendleton, Chief
Material-Navigation Systems Division
North American Rockwell Corporation
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Anaheim, California 92803

C. S. Perkins
Director of Purchases
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Assisted by:
H. R. Hansen
Administrative Assistant

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Director of Material
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* Completed by mail and telephone.

** Illinois Institute of Technology

NOTE: Individuals assisting the respondents are not counted in the total of 75.

APPENDIX D

EDUCATOR SAMPLE - PERSONAL INTERVIEW

(Total 15)

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Donald W. Dobler
Dean and Profess of Management
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Professor Emeritus
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Berkeley, California

Wilbur B. England
Professor, Chair Holder
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APPENDIX E

COGNITIVE DOMAIN ADAPTED FROM: OBJECTIVES: THE CLASSIFICATION OF EDUCATIONAL GOALS HANDBOOK I: COGNITIVE DOMAIN

Benjamin S. Bloom, Editor and
Max D. Engelhart, Walker H. Hill
Edward J. Furst and David H. Krathwohl
David McKay Company, Inc., New York, 1956

Cognitive Powers (from lowest to highest)

Knowledge

Recall of specifics, universals, methods, processes, patterns, structures, setting. This is remembering appropriate signals, cues, clues which bring knowledge out of mind storage to solve a problem or task. Knowledge of specific bits of information, terminology, specific facts, etc.

I. Knowledge of the Ways and Means of Dealing With Specifics; i.e.,

Ways of organizing, studying, judging and criticizing including methods methods of inquiry.

A. Knowledge of Conventions
Ways of treating and presenting ideas and phenomena such as usages, styles, practices.

B. Knowledge of Trends and Sequences

C. Knowledge of Classifications and Categories

D. Knowledge of Criteria

E. Knowledge of Methodology

II. Knowledge of the Universals and Abstractions in a Field

A. Knowledge of Principles and Generalizations

B. Knowledge of Theories and Structures

Intellectual Abilities and Skills

II. Comprehension

An individual knows what is being communicated and can utilize it without other references.

A. Translation

Accuracy of comprehension and ability to understand non-literal statements such as exaggerations, symbolism, metaphors, mathematical symbols.

B. Interpretation (ability to grasp the thought as a whole)

C. Extrapolation

The extension of trends beyond the given data to determine implications, consequences, corollaries, effects, etc. Dealing with conclusions in terms of immediate inferences from the explicit. Skill in predicting continuation of trends.

III. Application

The use of abstractions in particular and concrete situations. The abstractions may be general ideas, rules of procedures, or generalized methods, technical principles, ideas, and theories.

IV. Analysis

The breakdown of a communication, (oral, written report, etc.) into its elements or parts to determine relative hierarchy of ideas and the relations between the ideas.

A. Analysis of Elements

Identification of elements, ability to recognize unstated assumptions, skill in distinguishing facts from hypotheses.

B. Analysis of Relationships

Ability to check the consistency of hypotheses with given information and assumptions. Skill in comprehending the interrelationships among ideas.

C. Analysis of Organizational Principles

Organization, systematic arrangement, and structure which holds the communication together including explicit and implicit structures. The analysis of what holds the communication together.

V. Synthesis (arrange and combine to arrive at a new structure)

A. Production of a Unique Communication

Skill in writing excellent organization of ideas, etc.

B. Production of a Plan, or Proposed Set of Operations

Ability to propose ways of testing hypotheses, ability to plan a unit of instruction for a particular teaching situation.

C. Derivation of a Set of Abstract Relations

Ability to formulate appropriate hypotheses based upon an analysis of appropriate factors and the ability to modify such hypotheses in the light of new factors - ability to make mathematical discoveries and generalizations, etc.

VI. Evaluation

A. Judgment in Terms of Internal Evidence

The ability to assess general probability of accuracy in separating facts from the care given to exactness of statement, documentation, proof, etc.

The ability to indicate logical fallacies in arguments.

B. Judgments in Terms of External Criteria

Comparison of major theories, generalizations and facts.

Ability to compare a work with the highest known standards in its field--especially with other works of recognized excellence.

AFFECTIVE DOMAINS ADAPTED FROM: EDUCATIONAL OBJECTIVES THE CLASSIFICATION OF EDUCATIONAL GOALS HANDBOOK II: AFFECTIVE DOMAIN

By: David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia
David McKay Company, Inc., New York, 1956

Affective Domain (from lowest to highest)

I. Receiving (Attending)

The sensitivity of the learner or worker to the existence of certain phenomena and stimuli - from passive to active status.

A. Awareness
Conscious of something, a situation, object, color, form, he may or may not be able to verbalize the aspects of the stimulus which causes the awareness.

B. Willingness to Receive
Willing to tolerate a certain stimulus, listens, is tolerant, increased sensitivity to human need and pressing social problems but still neutral or in a state of suspended judgement.

C. Controlled or Selected Attention
Reads, listens with some discrimination as to meaning - some recognition of elements, alert to human values and judgements etc.

II. Responding

Activity attending, motivated, interested.

A. Acquiescence in Responding
Compliance but doesn't quite fully accept the necessity for doing so.

B. Willingness to Respond

C. Satisfaction in Response
Enjoyment in self expression, takes pleasure in conversing with many different kinds of people, etc.

III. Valuing

Internalized beliefs, attitudes, ideals; they are stable, consistent.

A. Acceptance of a Value
Belief or emotional acceptance of a proposition; sufficiently consistent in the values so we can identify it.

B. Preference for a Value

Working to be identified with a value or belief, he pursues it, wants it.

C. Commitment

A high degree of certainty over a belief; conviction, loyalty, a state of tension, highly motivated, faith.

IV. Organization

More than one value or attitude is relevant in various situations.

A. Comceptualization of a Value

Abstraction; ability to relate present and new values he is beginning to hold.

B. Organization of a Value System

Integration of several values which may or not be in total agreement.

V. Characterization By A Value or Value Complex

The person is identified with a particular value system, i.e., it controls his behavior; he acts with consistency to this value system.

A. Generalized Set

A predisposition to act a certain way

B. Characterization

This is the peak of the internalization process; one's view of the world, philosophy of life, the whole group of attitudes, behaviors, beliefs, ideas emphasized with internal consistency.

APPENDIX F

PURCHASING POSITION DESCRIPTIONS

I. Position: Staff Vice President, Materials

Reports To: Vice President, Manufacturing Services & Materials

Administrative Duties (Duties performed personally)

1. Inform, assist, and advise the top executives of X and of the various X divisions and subsidiaries on purchasing, packaging, material and inventory control, and traffic matters.

2. Develop the manner in which purchasing, packaging, material and inventory control, and traffic activities are conducted and audited throughout X.

3. Keep abreast of new developments in the field of materials and advise management executives of significant developments affecting their area of responsibility.

4. Negotiate contracts for materials common to more than one division or subsidiary of the corporation.

5. Maintain an organization staffed with high quality, competent personnel who are capable of outstanding performance in their specialty; direct the work of this group and their relationship with major operating unit personnel in accordance with the principles outlined in the X "Policy for Organization."

Managerial Duties (Duties delegated to subordinates)

6. Provide information, specialized advice and guidance on Material matters and specified centralized Material services needed by X's line management to plan, direct, and control the activities of the corporation.

7. Provide for developing adequate purchasing, packaging, material and inventory control, and traffic standards systems and procedures throughout X.

8. Provide for advice and consultation on traffic problems and coordinate traffic activities in the Product Divisions and subsidiaries so as to ensure safe and economical transportation of inbound and outbound materials and merchandise.

9. Provide for analyzing and evaluating purchase commitments of the Product divisions and subsidiary companies and recommend adjustments in the light of economic conditions and future business prospects.

10. Provide for the review and approval of major purchases for amounts in excess of $75,000.

Functional Duties (Relationship with others in X doing similar work)

11. Assure that competent, promotable people are selected and developed in the Materials function in all appropriate locations and levels of X.

12. Be functionally responsible for the development and maintenance of effective and sound Material programs in all operating divisions and subsidiaries of X.

13. Coordinate all Material activities in the operating divisions and subsidiaries to assure adherence to corporation policy and practices.

Basic Duties (Duties pertaining to his own organization)

14. Participate in the development of policies of the Manufacturing Services organization and interpret such policies throughout the Materials organization.

15. Develop objectives, policies and procedures for his organization for approval of the Vice President, Manufacturing Services and Materials.

16. Interpret and administer programs and procedures for his organization in accordance with approved policies.

17. Develop expense budget objectives for the operation of his organization; require performance within budget.

18. Develop a sound organization, staffed with able personnel, to perform the functions of his organization.

19. Develop a suitable successor and be responsible for training of managerial replacements at all levels in his organization.

20. Perform special assignments for the Vice President, Manufacturing Services and Materials, as requested.

II. Position: Western Region Purchasing Manager

Reports to: Director of Purchasing

PURPOSE

To be functionally responsible for all purchasing activities for the Sales offices and Warehouses, and operating plants in the Western Region specifically assigned to this office; also responsible for direct purchasing activities related to Market Development programs.

These responsibilities include participation in formulation of purchasing policies and procedures; and directing the execution of these policies and procedures in the areas under the jurisdiction of this office. Recognize that the Purchasing Department is a major contributor to the profit-making potential of the Corporation and exploit this potential to the best interests of the Corporation.

SUPERVISION RECEIVED

Areas of jurisdiction are assigned by the Director of Purchasing. The Corporate Purchasing Manual issued by the Director of Purchasing is the basic guide to the activities of the department. Further directives and written instructions are received from the Director of Purchasing as warranted by changing conditions. Technical assistance is required and received from other departments such as Engineering, Metallurgical, Systems & Procedures, Legal, Accounting, etc. as required. Corporate directives and policies as they affect purchasing are received from other departments such as Controller and Legal in the form of manuals and memoranda.

DEPARTMENTAL RELATIONSHIP

The Manager, Western Region Purchasing, reports to the Director of Purchasing and is indirectly responsible to Department Heads and Plant Managers for whom the Western Region Purchasing performs or supervises the purchasing activities. Directly supervises the activities of a Purchasing Agent, Senior Buyer and four sten-clerical personnel. Functionally responsible for the purchasing activities of four major plants, eight smaller plants and the Product Division and Sales Warehouses throughout the country.

EXTERNAL RELATIONSHIP.

Daily contacts with personnel in other departments such as Market Development, International and Chemical Divisions advising and assisting them in selecting and determining availability of products required for their operations. Advise and consult with department managers on long-range procurement and supply action to assist them in their program planning. Supervise the procurement activity of outside purchased items for resale by the Sales and Product division warehouses, which has a direct bearing on product availability and profit factor.

Daily contacts with executives, department heads and salesmen of outside companies relative to procurement action, purchase order and contract negotiation, product availability and technical information relative thereto; supervision of contract performance; and other related activities.

ACTIVITIES

Responsible for supervising the activities of the Western Region purchasing departments - determining personnel required; organizing and assigning for duties to be performed by these personnel; evaluating their work and counseling with them on their performance and advancement; establishing goals and objectives for the department and individuals.

Have direct and active responsibility for the procurement action in support of the programs being carried on by the Market Development department--secure and furnish cost information on materials and fabrication costs for products being considered; negotiate costs and select sources to produce products for test markets; secure technical data; expedite contract performance; etc. Assume the responsibility for the operation of the department without

continuous supervision. Exercise a high degree of discretion and judgment covering the activities of the department so that performance is always improving and the very best interests of the corporation are served.

Has the responsibility and authority to make decisions and take procurement action binding on the Corporation on purchase orders or contracts up to $350, 000 valuation per individual transaction.

Develop close relationships with other department heads and technical people so that their advice and counsel is readily available. Inasmuch as Purchasing can contribute substantially to the overall profit picture of the Corporation, the performance and activities of all the department must be geared and carried out to maximize these profits.

Formulate and issue Goals & Objectives and Cost Reduction Reports, and such other reports as may be requested or deemed necessary from time to time.

QUALIFICATIONS

The minimum education for the Manager, Western Region Purchasing would be a College degree in Business Administration or Engineering. Further study in law and economics would be desirable. Minimum work experience would be ten years continuous experience in heavy purchasing activities, including three or more years of supervisory activity. Some work or exposure to activities in the Sales field would be helpful.

Must show a high degree of discretion, integrity and good judgment in the performance of the job.

III. Position: Purchasing Agent

Reports to: Manager of the Operation (or the equivalent)

GENERAL RESPONSIBILITY

Directs and coordinates the purchasing function of multidivisional operation with both purchases and sales in excess of $6 million.

AUTHORITY RELATIONSHIPS

Line - Acts under direct line authority from Manager of the Operation (or the equivalent). Has line authority over Purchasing Department Staff.

Functional - Has functional control over the application of purchasing policy and programs in all areas of the operation.

SPECIFIC RESPONSIBILITIES

Organization and direction of:

1. **Purchase of all raw materials, supplies, and equipment.**
2. **Subcontracting and procurement of outside services.**
3. **Expediting of purchased material.**
4. **Sales of scrap, obsolete machinery and surplus material.**

5. Value Analysis Program
6. "Purchase for profit" program.
7. Information dissemination, i.e., price quotations, catalogs, availability, specifications, etc.
8. All other activities in the purchasing area.

Assure that all negotiations and purchase commitments by division personnel are conducted by or with the knowledge and consent of the Purchasing Department. This includes specifications, prices, terms, delivery, adjustments, etc.

Assure that all purchasing transactions are free of fraud or graft.

Assure that Purchasing policy and practice adheres to the requirements of all laws pertaining to the purchase of and payment for goods and services.

Assist in Inventory Control including policy formulation and scheduling planning.

Direct and coordinate traffic scheduling for shipping and receiving of inbound and outbound materials.

Audit and approval of invoices for purchased goods and services and settlement of claims against suppliers.

Represent the Company in various community, related trade associations, and industry activities.

Maintain current information on market conditions and forecasts relative to material and service needs.

The development and administration of purchasing policy, procedure and communications.

Promote good relations with suppliers.

DIRECT SUPERVISORY RESPONSIBILITY FOR Purchasing Department Staff

MONETARY RESPONSIBILITY (Expressed on an annual basis in terms of departmental budget, sales volume, sales quota, payroll, goods purchased, value added in manufacturing, etc.)

Purchases in excess of $6,000,000.

PRACTICAL SPECIALIZED OR TECHNICAL KNOW-HOW (What does the incumbent have to know to function in the job?)

Thorough knowledge of the Company - its products, policies, goals, facilities, personnel, organization, etc.

Thorough knowledge of purchasing administration theory and practice and of Company purchasing policy and procedure.

Working knowledge of all laws and government regulations related to purchasing goods and services.

Ability to effectively communicate in written and oral form.

Familiarity with relevant markets, sources of supply and available products and services including transportation.

General knowledge of Company manufacturing methods and capabilities.

General knowledge of business practice.

HUMAN RELATIONS KNOW-HOW (What does the incumbent have to do with or about people which indicates the qualitative skills in human relations required by the job?)

Extensive and continual contact with vendors, management personnel at all levels throughout the Company, management of other companies and trade associations. These contacts require the use of sound human relations and skillful techniques of analytic evaluation and persuasive negotiation to achieve desired results.

MANAGERIAL KNOW-HOW (What does the incumbent have to do about managing i.e. intergrating and coordinating diverse activities, contributions to planning and policy formulation?)

Plans, administers and enforces effective purchasing policy and practice within the diverse segments of the organization in order to accomplish unity of direction and achieve desired goals in cost reduction, quality assurance, inventory control, service, etc.

Structures and coordinates the implementation of meaningful programs for analysis and evaluation of present material requirements and future needs.

PROBLEM SOLVING (What are the job requirements for original thinking, i.e. analyzing, reasoning, developing new methods, policies, products, ideas, etc.?)

High degree of original thinking required to understand and solve intricate problems in material and services procurement, value analysis, expediting, subcontracting, inventory control and transportation to obtain required objectives of price, quality, service and cost reduction.

IV. Position: Manager of Purchasing Research

Accountability Objective(s):
Under the direction of an Assistant General Purchasing Agent, this position is accountable for conducting selected purchasing studies and obtaining data which will (1) assist the Department management in formulating policy or (2) assist other purchasing personnel in reducing Company operating costs through new buying procedures.

Nature and Background of Position:

The incumbent's principal concern is with studies which, by their nature, are too extensive to be conducted by the Purchasing Agent whose commodity is involved or with analyses which are of value to more than one commodity group. The types of studies can be classified as follows:

1. Commodity Studies
2. Method Analysis
3. Contract and Procurement Analysis
4. Price Analysis
5. Cost Analysis
6. Vendor Analysis
7. Material Analysis
8. Make or Buy Analysis
9. Standardization
10. Trade Relations
11. Purchasing Systems

Research projects in the foregoing areas are selected for their potential contributions toward one or more of the following specific Purchasing objectives:

a. More effective administrative control of purchasing activities.

b. More effective contract negotiation.

c. A greater contribution by Purchasing to the broad problems of Company management.

d. More comprehensive information on products, prices, or markets.

e. Development of new sources of supply.

f. A greater contribution by Purchasing as a profit contributing center.

The incumbent works in close cooperation with the Purchasing Agents who are most affected by the problem under study, giving and receiving information as the study progresses.

Research projects may be conceived by the incumbent, department management, the Purchasing Agents or their staff people, or the Plant Purchasing Agents or others. The supervisor is kept informed as to the projects undertaken and provides occasional direction as to objectives and priority. The incumbent is expected to carry out his studies with a minimum of functional supervision, having been selected for this position because of his experience and for his ability in this activity.

Contacts are extremely varied throughout the Company and are extensive with all levels of Sales, Engineering and Accounting in both the home office and field organizations. Principal outside contacts are with vendors' sales and management personnel, government agencies, ,publishers of trade and technical papers, government and private economists or economic consultants.

The incumbent directly supervises one non-exempt employee.

This position requires an engineering degree or its equivalent and broad knowledge of materials and extensive purchasing experience. The incumbent must be articulate, analytical, and capable of performing discrete and diplomatic inquiries.

Principal Activities in Attaining Accountability:

RECEIVES requests for research work and CONSIDERS feasibility and priority.

PLANS research project.

CONDUCTS detailed studies, INTERVIEWING Company or outside personnel as necessary or READING from trade and technical periodicals or library references.

ANALYZES and REPORTS results and MAKES RECOMMENDATIONS based on his analysis.

SUPERVISES tabulation of all statistical information for trade relations as well as data on other Department activities.[1]

V. Position: Buyer (Level 4 - Highest) - Production Buying

Primary Purpose of Position - Responsible for the purchase of assigned production commodities in accordance with corporate policies and requirements; commodities for this level involve those classified as key and/or critical items in regard to design, specification and variety. 50% or more of Buyer's time is consumed purchasing commodities related to categories No. 22 through 31 of the current "Grade Structure Category Schedule" per agreement between Purchasing and Salary Administration.

To purchase assigned production parts, assemblies, and/or materials in accordance with Corporation requirements. At this level such requirements normally are "key and/or critical items" in regard to part design and specification.

By way of further definition, these items quite normally involve complex situations on all the contributing factors affecting purchases, including long lead time and high tooling cost, and usually frequent and/or significant engineering and economic changes. They involve, in many instances, advance planning with Product Planning and Development Staff; working with advance drawings and requisitions; special packaging; participating in major negotiation meetings and performance reviews; and intensive follow-up at all stages through to production build-up. The impact of the correctness of buying decision and recommendations upon the finances and operations of the Corporation is very substantial.

Buyer involvement and responsibility continues from original styling concept through all phases of procurement and actual model year production usage.

Major Duties of Position

Establishes and maintains ability as a buyer to purchase effectively through knowledge of requirements, market conditions, available sources, materials and specifications, special packaging, tooling aids and gauges; buying methods, authorizations and procedures; and by self-development.

Reviews and analyzes requisitions, obtains quotations from potential suppliers, uses price targets, and conducts negotiations subject to approvals and commitment authorizations, selects supplier(s), allocates business, determines price and makes purchase order commitments--including, as appropriate, determinations on special tools, advance authorizations, new sources to be evaluated, commodity groupings, intensive studies of supplier performance, supplier suggestions, non-ferrous metal prices, etc., in addition to the normal factors of sourcing, packaging, payment terms, delivery points, and so on.

Makes commitments for the Corporation on these purchases in accordance with established commitment authorizations and personal delegation which may be to value of $100, 000 (piece price-$90, 000; special tools -$10, 000). Participates, when required, in negotiations between X Purchasing management and supplier executives, and in all cases executes commitment document after making final recommendation or decision on placement of business.

Maintains continuing responsibility throughout the procurement and building programs to follow the performance of suppliers in regard to sample approval, production start-up, acceleration, proper quality and delivery, and negotiating price adjustments for engineering and economic changes, etc., and to obtain corrective action as necessary.

Maintains effective liaison with suppliers and corporate requisitioning and other affected activities, especially to understand requirements and protect continuity of supply in face of any temporary work stoppages, etc.

Negotiates supplier claims arising from engineering changes, cancellations and the like by discussing them with suppliers, negotiating basis for settlement and recommending such settlement action to management as appropriate.

Advises Purchasing management on current developments, market prices and trends, supplier status problems, supplier engineering and technological improvements, availability of new sources and related topics affecting purchase of assigned items.

Ensures that proper records are maintained on part histories and commitments.

As necessary, furnishes information authoritatively to corporate or outside activities on his area of responsibility. Presents most direct and constant contact with the business public and thereby represents X image in an area critical to the Corporation in terms of outside opinion of ethics and policy.

Knowledge and Skill Requirements

Generally college degree in Business Administration (emphasis on Economics, Cost Accounting, etc.) and/or Engineering (emphasis on Automotive, Mechanical, Industrial Engineering, etc.). Graduate degrees in similar areas also desirable and may be considered in lieu of a portion of experience.

Minimum of eight years practical business experience reaching to higher level responsible position in automotive purchasing, production control, engineering, cost analysis, or pricing with at least four of such years in actual automotive buying involving several major complex commodities or a commodity requiring a high degree of specialization or expertness (e.g., major construction, major die castings, etc.). One year of such buying experience coupled with three years of buying related higher level purchasing experience (e.g., Purchasing Research or Administration) may be considered.

Requires extensive analytical, persuasive and negotiating ability in view of substantial impact of agreements with suppliers; necessitates individual meeting highest standards of integrity, personal appearance and presentation due to constant effect on corporate profit results and continuing contact with business public in critical area with resultant reflection on corporate image. Also requires ability to project long-range planning and source development and to anticipate and evaluate future reflection on corporate profit situation in recommending sourcing patterns.

VI. Position: *Project Expediter

Reports to: Supervisor of Project Expediting

GENERAL FUNCTION:

The Project Expediter is responsible for establishing and maintaining the documentation on the status of all purchase orders to ensure vendor's on-time delivery to the jobsite. He is responsible for keeping abreast of anticipated vendor problems that could affect schedules and for keeping engineering, construction and procurement executives informed of deviations from original schedules.

PRIMARY RESPONSIBILITIES:

1. **Establishes and maintains documentation on the status of all assigned purchase orders to ensure vendor's on-time delivery to jobsite, including:**
   - a. **Checking drawing and inspection requirements and any conditions on purchase order or material requisition that may affect delivery.**
   - b. **Securing from vendor names of personnel responsible for order and securing from them written fabrication and shipping schedules.**
   - c. **Expediting drawings and other pertinent data between X and the vendor.**

d. Evaluating information secured from vendor and, when applicable, requesting field expediting to follow-up at the vendor location.

e. Checking vendor's sub-suppliers and notifying vendor of anticipated problems or delays.

f. Checking vendor's production department to ensure that fabrication is started as scheduled and that production schedules are maintained through fabrication.

g. Identifying possible problem areas that could affect scheduled shipment and working with vendor to solve problem; notifying engineering, construction and procurement if delays do occur.

h. Routing of materials and equipment in shipment and tracing of intransit materials and equipment.

2. Maintains accurate and up-to-date records on the status of all assigned purchase orders.

3. Prepares reports for engineering, construction and procurement showing the status of orders on assigned projects.

4. Performs the general functions inherent in all managerial and supervisory positions.

PRINCIPAL WORKING RELATIONSHIPS:

1. Works with engineering, construction and procurement executives to ensure on-time delivery of vendor purchased materials and equipment.

* Distinction between Senior Project Expediter and Project Expediter relates to length of service and proficiency in performing duties. Both Project Expediter and Senior Project Expediter perform the same duties.

VII. Rate each on this scale: Fair Good Excellent

JOB FUNCTIONS

Leadership
Does he enthusiastically motivate others?

Department Contacts
Is he able to effectively communicate orally, by example, or in writing, knowledge of company policies and divisional requirements for effective guidance?

Division Contacts
Are his contacts enough and properly planned so that he can evaluate the effectiveness of the purchasing function?

Popularity and Acceptance
Is he able to maintain good working relations with the purchasing organization, divisional management, and all other personnel to secure the wholehearted cooperation necessary for the effective completion of staff projects?

Agressiveness
Does he have the correct degree of agreeable agressiveness for good results?

Tact
Does he strike the proper balance between "give and take" without excess in either direction?

Development of Others
Does he develop subordinates and is he able to motivate and build enthusiasm in all personnel?

ADMINISTRATIVE ABILITY

Does he have accuracy, perception and persuasiveness in his communications?

Records
Does he maintain sufficient records for effective control?

Planning and Organization of Work
Is he effective in the layout and delegation of work for himself and his associates for maximum use of time, effort, and development of personnel?

SPECIFIC KNOWLEDGE AND UNDERSTANDING OF THE COMPANY AND ITS POLICIES

Products
Is he sufficiently acquainted with all company products in order to understand each product's relation to overall company purchasing practices?

Policies and Prices
Does he have a thorough basic understanding of policies, prices and purchasing routine and the reasons for them to handle purchasing problems effectively with a minimum of supervision?

Markets and Conditions
Does he maintain a sufficient knowledge of market conditions to effectively assist in planning purchasing programs.

Performance
Is there a basic soundness in his economic sense, marketing policies, marketing ideas so that he shows skill in handling purchasing negotiations?

GENERAL QUALITIES

Personality
What overall impression does he create?

Wearability
Does he wear in such a manner that he grows in stature in his relations with subordinates, associates and suppliers?

Enthusiasm - Loyalty
Does he have an active and loyal interest in the discharge of his duties?

Flexibility
Is he adaptable and flexible in all aspects of management environment?

Dependability
What about his execution of ideas, assignments and the obtaining and conveying of reliable and objective information?

Initiative
Does he use his own head and does he possess inner resourcefulness, judgment and maturity?

Intellectual Capacity
How effective is he at analytical problem solving, and how readily can he absorb and retain knowledge?

Objectivity
Does he possess open-mindedness and emotional stability?

Sensitivity
How quick is he to feel a situation and recognize a true problem?

Accomplishment
Does he get things done?

APPENDIX G

THE PROFESSIONAL EDUCATIONAL STANDARDS PROGRAM

COURSES IN THE PURCHASING MANAGEMENT CURRICULUM

COURSE	NO. OF SEMESTER CREDIT HOURS*	
Business Core Requirements		30
Principles of Accounting, I & II	6	
Principles of Economics, I & II	6	
Principles of Business Law	3	
Principles of Finance	3	
Principles of Management	3	
Principles of Marketing	3	
Principles of Money & Banking	3	
Principles of Statistics	3	
Purchasing Requirements		18
Purchasing, I & II	6	
Production Management, I	3	
Managerial or Cost Accounting	3	
Supervisory Management or Human Relations	3	
Traffic and Transportation	3	
Electives (at least 12 of the 33)		12
Advanced Purchasing, III & IV	6	
Materials Management, I & II	6	
Business Communications	3	
Business & Professional Speech	3	
Electronic Data Processing	3	
Industrial Psychology	3	
Personnel Management	3	
Production Management, II	3	
Quality Control	3	
Total Requirements in Semester Credit Hours		60

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* Based on 2 semesters per year, where a credit represents 15 classroom hours.

Source: The Guide to Purchasing, New York: National Association of Purchasing Management, 1967.